

# **Completing the eProject Builder Template for Your AFFECT BIL FAC Grant Application**

April 18, 2024







#### **Disclaimer**

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## **Learning Objectives**

- Learn about the Assisting Federal Facilities with Energy Conservation Technologies (AFFECT) Bipartisan Infrastructure Law (BIL) Federal Agency Call (FAC) grant application process at a high level
- Access and complete the eProject Builder (ePB) template for AFFECT
- Use the ePB template for different types of projects and funding
- Understand how the information in the ePB template is used during the grant evaluation process



## Agenda

- AFFECT BIL FAC Overview
- ePB Overview
- Accessing & Submitting the ePB Template for AFFECT
- Introduction to the ePB Template
- Project Examples with the ePB Template
- Use of the ePB Template Information for AFFECT

WHAT AFFECT BIL FAC, *Advancing Net-Zero Federal Facilities* – Via four topic areas that support net-zero buildings at different project stages.

WHY Authorities (42 U.S.C. §8256(b)) and Priorities (42 U.S.C. §8253 and Executive Orders)

WHEN Summer 2023 thru Spring 2025 (Upcoming Phase 2 Deadline: June 27, 2024)

**HOW MUCH** \$250,000,000

**HOW** Selection Criteria and Application Content

WHO Federal Agencies ONLY

WHERE S3 eXCHANGE at <u>https://infrastructure-exchange.energy.gov</u>, DE-FOA-0003026

**HELP** AFFECT BIL Team at <u>AFFECTBIL@hq.doe.gov</u>

#### **ePB** Overview

- Secure web-based system to enter, upload, track and report project data
  - Standardized format, automated calculations, transparency, advanced cybersecurity measures
- REQUIRED for DOE ESPC IDIQ and ENABLE projects; strongly recommended for all other federal energy and water projects
- Outputs: Task Order (TO) schedules, Measurement and Verification (M&V) reports, custom portfolio reports, raw project data, Compliance Tracking System (CTS) report
- Current status: ~3,200 projects; \$20B investment and \$30B guaranteed savings
- Highly secure: Lab and 3rd party security scans and remediation
- Two key components:
  - Excel data templates: 1) project data, 2) M&V data

### **Accessing & Submitting the ePB Template for AFFECT**

еРВ	Project Statistics - Help/Documentation Abo	ut	
	Help, Do	ocumentation ar	nd Training
	eProject Builder		eProject eXpress
	Upcoming Training Webinars	~ 17	Upcoming Webinars
	Data Tamplatas		Data Templates
		~	Haming Documentation
	Calculating Template 3.3.4	in tot	Key Features and Benefits of ePX
	amortization calculations for financed projects, for develop project financial scenarios.	ping O	Training and Informational Videos
	Non-Calculating Template 3.3.4 This ePB version of the data upload template provides no calculations. All information must be entered manually.		2. Gather your info template and c
	Training Documentation	~	<ul> <li>One showing yo</li> </ul>
	E Key Features and Benefits of ePB	~	<ul> <li>The other show</li> </ul>
	Training and Informational Videos	~	

- 1. Download the Excel-based ePB <u>calculating</u> template, referred to as the ePB template, from the ePB Help/Documentation page.
  - <u>https://eprojectbuilder.lbl.gov/help</u>on the ePB (left) side under "Data Templates"
  - You do not need to register for an account or upload any information to the website
- Gather your information and populate your data into the ePB template and create/save <u>two different versions</u>:
  - One showing your project without the grant applied
  - The other showing your project with the grant request applied
- 3. Include both versions with your AFFECT grant application materials and upload to S3 eXCHANGE: <u>https://infrastructure-exchange.energy.gov/</u>

### Introduction to the ePB Template

#### **ePB** Template Overview

An MS Excel workbook that contains several tabs in which...

- Yellow cells indicate fields where data can be entered
- Grey cells indicate values calculated or derived from elsewhere based on other inputs
- Red text with asterisk indicates required fields that must be completed

Tabs that require data entry for the grant are...

- Summary Schedule
- Escalation Rates
- Schedule 1: Cost Savings & Payments
  - For guaranteed savings or direct-funded projects, use **Schedule 1**
  - For utility energy service contracts (UESC) use Schedule 1u; for energy sales agreements (ESA) use Schedule 1ee and Schedule 1ESA
- Schedule 2a: Implementation Price by Energy Conservation Measure (ECM)
- Schedule 3: Performance Period Cash Flow
- Schedule 4: Estimated Savings by ECM
- Schedule 4g: Estimated Greenhouse Gas (GHG) Emissions Savings by ECM

### **Summary Schedule: Project Agreement Type**

First select the Project Agreement	
This choice will configure other cell according to the agreement type (t	Is and tabs in the ePB template 4 Agreement Type Choose from list)* Guaranted Savings Shared Savings UESC PPA ESA Project Facilitator
Project Agreement Types	ePB Template Attributes
Guaranteed Savings, Shared Savings	Calculates estimated and guaranteed savings and payments on Schedule 1 (orange tab)
UESC	Savings not guaranteed; calculates estimated savings and payments on Schedule 1u (plum tab)
PPA	Same configuration as for Guaranteed Savings – uses Schedule 1 (orange tab)
ESA	Calculates ESPC savings payments on <b>Schedule 1ee</b> and ESA payments on <b>Schedule 1esa; Schedule 2A</b> enables designation of ECMs as ESA-specific ECMs in Column C (blue tabs)
Direct-funded	Eliminates fields dealing with financing (e.g., interest rate), but can still use Schedule 1 for savings
Build-Own-Operate, Chauffage, Other	Same configuration as for Guaranteed Savings – uses Schedule 1

Summary Schedule Annual Escalation Rates Sch1-Ann Cost Sav & Pymts Sch1u-Ann Cost Sav & Pymts Sch1ee-Ann Cost Sav & Pymts Sch1esa-ESA Pymts

The Schedule 1 tab labels across the bottom of the workbook are color-coded for each Schedule 1 Project Agreement Type: Sch1 – orange – guaranteed savings; Sch1u – plum – UESC; Sch1ee and Sch1esa – blue - ESA

#### **Summary Schedule: Other Fields**

- Complete the Summary Schedule by addressing as many of the fields as possible, especially:
  - All fields in red text with asterisk are required
  - Project Characteristics (as many as possible)
  - Other fields as possible/applicable, depending on the project agreement type
- Reference the latest <u>OMB discount rates</u> <u>circular</u> to estimate the Index Rate and Added Premium (the two components of the interest rate).
- All workbook schedules/tabs contain a "Notes" field for additional explanation.

NOTE: The Summary Schedule may display an error message until all fields that contribute to the amortization calculation are completed.

w l			BASIC PROJECT INFO	DRMATION		
Agreement Type	(choose from list)*					
	Role	Institution	Name	Title	Email	Phone
	Project Facilitator					
	Customer					
Project Contact Information	Contractor					
	Finance Specialist					
	Primary Financier					
	Project Ide	ntification			Projec	t Characteristics
	Task/Purchase Order #				commas)	
	Contract #				Number of Buildings in Project	
	Project Name				List of Buildings in Project (separated by commas)	
Project	Primary Project Location-City				Market Segment	
Identification & Characteristics	Primary Project Location-State		_		Total Floor Area Affected by project (Square Feet)	
	Primary Project Location-Zipcode				Consumption of Affected Buildings (MMBtu/yr)	
	Agency Name*		<u> </u>		Implementation Period (months)*	
	Project ID #		<u> </u>		Federal May Version	
	Financir	ig ierms			Total Implementation Price (from	cr Capitalization
	Applicable Financial Index				Schedule-2a Total)	\$0
	Performance Period (years)				capitalized construction period interest (\$)*	
	Index Rate*				PLUS Financing Procurement Price other expenses (\$)*	-
	Added Premium (adjusted for tax incentives)*				LESS Implementation Period Payments (from Schedule-1, (c))	\$0
Costs & Financials	Project Interest Rate (sum of two above inputs)	0.00%			Total Amount Financed (principal)	\$0
	Financing Issue Date (mm/dd/yyyy)				Bonded Amount	
	(mm/dd/yyyy)*				(mm/dd/yyyy)	
	Primary Type of Financina (choose				<b>.</b>	in an allal Community
	from list) Secondary Type of Financing					inancial Summary
	(choose from list)			<b></b>	(MMBtu)	
	Payment Timing*				(kGal)	
					Total Estimated Cost Savings	
	Cummente e % et Estimente et 2 - 1				SDRIVDC T20. D99T0D1000	
	Guarantee % of Estimated Savings*				Total Payments	
	Guarantee % of Estimated Savings* Federal Contract Type Primary Electric Utility				Total Payments	
Other	Guarantee % of Estimated Savings* Federal Contract Type Primary Electric Utility		_		Total Payments Templa	te Errors/Warnings

#### **Escalation Rates**

- Complete the Annual Escalation Rates for improved calculations of project impact and analysis.
- If your project involves other fuels such as diesel, heating oil, etc., make sure to indicate the other types of fuel savings in the Escalation Rates, cells E4 and F4 (choose from dropdown list).
- It is recommended that you use the NIST Energy Escalation Rate Calculator (EERC) tool to calculate escalation rates: <u>https://pages.nist.gov/eerc/</u>
- You may also use your utilities' escalation rates, if available.

E4	▼ : × ✓ f <sub>x</sub> Other Savings Typ	e 1: Other							
	А	В	С	D	E	F	G	Н	I.
1		ANNUA	L DOLLA	R SAVIN	GS ESCALAT	ION RATES			
3									
	Portormanco Poriod (vogr)	Electric	Electric	Natural	Other Savings	Other Savings	Wator	0.0	Other Non-
4	Tenomance Tenoa (year)	Ellergy	Demana	Other	Savings Type 1: Diesel	ype z. Oner	Wuler	Cam	Energy savings
5	Implementation start through first year			Other	Savings Type 1: Gasoline	^			
6	2			Other	Savings Type 1: Heating				
				Other	Savings Type 1: Jet Fuel				
8	4			Other	Savings Type 1: Purchase Savings Type 1: Chilled V				
0	5			Other	Savings Type 1: Propane				
9	5			Other	Savings Type 1: Other	×			
10	6								
11	7								
12	8								
13	9								
14	10								
15	11								
10	12								

#### Schedule 1: Cost Savings & Payments

- Schedule 1 will mostly auto-populate for all performance years based on financial and savings information entered in other tabs.
- **Do not** enter your requested AFFECT grant amount in the Year 0 "Payments" cell on this tab; you will enter the grant on another tab.
- If you wish, you can enter any expected cost savings that would accrue during the implementation period/project construction (Year 0).

	А	В	С	D	E
1			SCHEDULE #1		
2		COST	SAVINGS AND PAYME	INTS	` <b>`</b> ``
3					
4	Jacoba Martina Davia d	(a)	(b)	(c)	
5	(Year 0)	Estimated Cost Savings*	Guaranteed Cost Savings*	Payments*	
6	(				
7	Performance Period	(d)	(e)	(f)	(g)
8	(Year)	Estimated Annual Cost Savings	Guaranteed Annual Cost Savings	Annual Payments	Annual Dollar Savings Retained by Customer
9	1	\$0	\$0	\$0	\$0
10	2	\$0	\$0	\$0	\$0
11	3	\$0	\$0	<b>\$</b> 0	\$0
12	4	\$0	\$0	<b>\$</b> 0	\$0
13	5	\$0	\$0	<b>\$</b> 0	\$0
14	6	\$0	\$0	<b>\$</b> 0	\$0
15	7	\$O	\$0	<b>\$</b> 0	\$O
16	8	\$0	\$0	<b>\$</b> 0	<b>\$</b> 0
17	9	\$0	\$0	<b>\$</b> 0	<b>\$</b> 0
18	10	\$0	\$0	<b>\$</b> 0	<b>\$</b> 0
19	11	\$0	\$0	<b>\$</b> 0	<b>\$</b> 0
20	12	\$0	\$0	<b>\$</b> 0	\$0
21	13	\$0	\$0	<b>\$</b> 0	\$0
22	14	\$0	\$0	<b>\$</b> 0	\$0
23	15	\$0	\$0	<b>\$</b> 0	\$0
24	16	\$0	\$0	\$0	\$0
25	17	\$0	\$0	\$0	\$0
26	18	\$0	\$0	\$0	\$0
27	19	\$0	\$0	\$0	\$0
28	20	\$0	\$0	\$0	\$0

#### **Schedule 2a: Implementation Price by ECM**

- Schedule 2a is where you will create your two different scenarios/different template versions for the grant.
- Enter all project ECMs, each on its own row; complete all fields indicated in red.
- For the ECM(s) that the grant will apply to:
  - For the scenario that shows the grant, do enter the grant amount(s) in the "Applied Incentives" column.
  - If the ECM is included in both scenarios (with and without the grant) but the ECM will be different (e.g., a different size), make sure to adjust all of the applicable information fields accurately.
  - If the ECM(s) for the grant version is/are going to be ADDED to the non-grant version, add it/them on their own row(s).



#### **Schedule 3: Performance Period Cash Flow**

- Complete all applicable fields in Schedule 3 for projects that involve a performance period and performance period expenses, such and M&V.
- Enter estimated performance period expenses on rows 11 19.
- If you expect to receive performance period incentives or other payments (e.g., ITC, depreciation, RECS), enter that information on row 6, "Performance Period Incentives and Other Revenues."
- **Do not** enter the AFFECT grant on Schedule 3.

	А	В	С	D	E	Z	AA	AB	AR
1									
2									
3			Implementation	r	r	)	r	1	
4		Term (year)	Period (Year 0)	1	2	23	24	25	Totals
5		Principal Repayment		\$0	\$0	\$0	\$0	\$0	\$0
6	Debt	Performance Period Incentives and Other Revenues		\$0	\$0	\$0	\$0	\$0	\$0
7	Service/Performance Period Payments	Dollar savings retained by customer		\$1	\$1	\$1	\$1	\$1	
8		Interest (\$)							\$0
9		Total Debt Service (a)		\$0	\$0	\$0	\$0	\$0	\$0
10									
11		Management/Administration							\$0
12		Operation							\$O
13		Maintenance							\$0
14		Repair and Replacement							\$0
15		Measurement and Verification*							\$0
16		Other PP Expense 1: Other							\$0
17	Performance Period	Other PP Expense 2: Other							\$0
18	Expenses	SUBTOTAL Before Application of Performance Period Delivery Percentage		\$0	\$0	\$0	\$0	\$0	\$0
19		Performance Period Delivery Percentage (%)*							
20		Performance Period Delivery Charge (\$)		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0
21		TOTAL Performance Period Price (b)		\$0	\$0	\$0	\$0	\$0	\$0
22									
23	Annual Cash Flow (Performance Period)	TOTAL - ANNUAL PAYMENTS (a)+(b)	\$0	\$0	\$0	\$0	\$0	\$0	\$0

#### **Schedule 4: Estimated Savings by ECM**

- Complete the baseline consumption fields (columns E N), as applicable.
- Complete the first year estimated cost and resource savings (columns O AD), as applicable.
- Schedule 4 will automatically calculate an ECM-level and project-level simple payback period (years).

1	А		В		С	D	E	F	G	Н		1	J	К	L	М	N				
1															FIRST	VEAR ESTIN					
3															TIKST	TEAK LSHIN					
4				ECM						B	aseline Energy	and Non-energ	gy Consumption	n							
5	ECM Number		Short Descriptio	on	Location/Facility ID	First Year M&V Option*	Baseline electricity use	Baseline electricity demand	Baseline natural gas use	Baseline Use:	Diesel Bas He	eline Use: ating Oil	Baseline water use	Baseline energy and B resource costs	aseline O&M costs	Baseline 1 other non- energy costs	Type of other non-energy costs				
6							(kWh/yr)	(kW/mo)	(MMBtu/yr)	(MMBtu/y	/r) (N	MBtu/yr)	(kGal/yr)	(\$/уг)	(\$/yr)	(\$/уг)					
7		Project E Technico Project P	Development P al Energy Audit ( Proposal	rice (PDP)- and				1													
8																					
254			0	Р	Q	R	S	T	U	V	W	Х	Y	Z	AA	AB	AC	AD	AE	AF	AG
255			SCHE ST SAVING	EDULE #4 S BY ENE	RGY CONSI		IEASURE														
257																					
25/			,		1	1 1						I	f		1	1	1	1			
257 258 259			ы	b2	c1	c2	dl	d2	ela	e2a	elb	e2b	f= 0.003412*b1+ d1+e1a+e1b	g = b2+c2+d2+e2 a+e2b	? h	i	j	k	l = g+i+j+k	m	n = m/l
257			b1 Electric energy savings	b2 Electric energy savings	c 1 Electric demand savings	c2 Electric demand savings	d1 Natural gas savings	d2 Natural gas savings	e la Other Savings Type 1: Diesel	e2a Other Savings Type 1: Diesel	e 1 b Other Savings Type 2: Heating Oil	e2b Other Savings Type 2: Heating Oil	f = 0.003412*b1+ d1+e1a+e1b Total energy savings	g = b2+c2+d2+e2 a+e2b Total energy cost savings	? h Water saving	i s Water savings	j O&M cost savings	k Other non- energy cost savings	l = g+i+j+k Estimated annual cost savings	m Implementation price	n = m/l Simple Payback
257			b1 Electric energy savings (kWh/yr)	b2 Electric energy savings (\$/yr)	c1 Electric demand savings (kW/mo)	c2 Electric demand savings (\$/yr)	d 1 Natural gas savings (MMBtu/yr)	d2 Natural gas savings (\$/yr)	e1a Other Savings Type 1: Diesel (MMBłu/yr)	e2a Other Savings Type 1: Diesel (\$/yr)	e 1 b Other Savings Type 2: Heating Oil (MMBtu/yr)	e2b Other Savings Type 2: Heating Oil (\$/yr)	f = 0.003412*b1+ d1+e1a+e1b Total energy savings (MMBtu/yr)	g = b2+c2+d2+e2 a+e2b Total energy cost savings (\$/yr)	h Water saving (Kgal/yr)	i s Water savings (Ş/yr)	j O&M cost savings (\$/yr)	k Other non- energy cost savings (\$/yr)	l = g+i+j+k Estimated annual cost savings (\$/yr)	m Implementation price (\$)	n = m/l Simple Payback (years)
258			bl Electric energy savings (kWh/yr)	b2 Electric energy savings (\$/yr)	c1 Electric demand savings (kW/mo)	c2 Electric demand savings (\$/yr)	d1 Natural gas savings (MMBtu/yr)	d2 Natural gas savings (\$/yr)	e 1a Other Savings Type 1: Diesel (MMBłu/yr)	e2a Other Savings Type 1: Diesel (\$/yr)	e1b Other Savings Type 2: Heating Oil (MMBtu/yr)	e2b Other Savings Type 2: Heating Oil (\$/yr)	f= 0.003412*b1+ d1+e1a+e1b Total energy savings (MMBtu/yr)	g = b2+c2+d2+e2 a+e2b Total energy cost savings (\$/yr)	? h Water saving (Kgal/yr)	i s Water savings (\$/yr)	j O&M cost savings (\$/yr)	k Other non- energy cost savings (\$/yr)	l = g+i+j+k Estimated annual cost savings (\$/yr)	m Implementation price (\$) \$0	n = m/l Simple Payback (years)
258			bl Electric energy savings (kWh/yr)	b2 Electric energy savings (\$/yr)	c1 Electric demand savings (kW/mo)	c2 Electric demand savings (\$/yr)	d1 Natural gas savings (MMBtu/yr)	d2 Natural gas savings (\$/yr)	e 1a Other Savings Type 1: Diesel (MMBłu/yr)	e2a Other Savings Type 1: Diesel (\$/yr)	e1b Other Savings Type 2: Heating Oil (MMBtu/yr)	e2b Other Savings Type 2: Heating Oil (\$/yr)	f = 0.003412*b1+ d1+e1a+e1b Total energy savings (MMBtu/yr)	g = b2+c2+d2+e2 a+e2b Total energy cost savings (\$/yr) \$0	P h Water saving (Kgal/yr)	i s Water savings (\$/yr)	j O&M cost savings (\$/yr)	k Other non- energy cost savings (\$/yr)	l = g+i+j+k Estimated annual cost savings (\$/yr) \$0	m Implementation price (\$) \$0	n = m/l Simple Payback (years)
259			b1 Electric energy savings (kWh/yr)	b2 Electric energy savings (\$/yr)	c1 Electric demand savings (kW/mo)	c2 Electric demand savings (\$/yr)	d1 Natural gas savings (MMBtu/yr)	d2 Natural gas savings (\$/yr)	e 1a Other Savings Type 1: Diesel (MMBłu/yr)	e2a Other Savings Type 1: Diesel (\$/yr)	e1b Other Savings Type 2: Heating Oil (MMBłu/yr)	e2b Other Savings Type 2: Heating Oil (\$/yr)	f = 0.003412*b1+ d1+e1a+e1b Total energy savings (MMBtu/yr)	g = b2+c2+d2+e2 a+e2b Total energy cost savings (\$/yr) \$0 \$0	P h Water saving (Kgal/yr)	i s Water savings (\$/yr)	j O&M cost savings (\$/yr)	k Other non- energy cost savings (\$/yr)	l = g+i+j+k Estimated annual cost savings (\$/yr) \$0 \$0	m Implementation price (\$) \$0	n = m/l Simple Payback (years)
259			b1 Electric energy savings (kWh/yr)	b2 Electric energy savings (\$/yr)	c1 Electric demand savings (kW/mo)	c2 Electric demand savings (\$/yr)	d1 Natural gas savings (MMBtu/yr)	d2 Natural gas savings (\$/yr)	e 1a Other Savings Type 1: Diesel (MMBłu/yr)	e2a Other Savings Type 1: Diesel (\$/yr)	e 1b Other Saving: Type 2: Heating Oil (MMBłu/yr)	e2b Other Savings Type 2: Heating Oil (\$/yr)	f = 0.003412*b1+ d1+e1a+e1b Total energy savings (MMBtu/yr) 	g = b2+c2+d2+e2 a+e2b Total energy cost savings (\$/yr) \$0 \$0 \$0 \$0	h Water saving (Kgal/yr)	i S Water savings (\$/yr)	j O&M cost savings (\$/yr)	k Other non- energy cost savings (\$/yr)	I = g+i+j+k Estimated annual cost savings (\$/yr) \$0 \$0 \$0 \$0	m Implementation price (\$) \$0	n = m/l Simple Payback (years)
259			b1 Electric energy savings (kWh/yr)	b2 Electric energy savings (\$/yr)	c1 Electric demand savings (kW/mo)	c2 Electric demand savings (\$/yr)	d1 Natural gas savings (MMBtu/yr)	d2 Natural gas savings (\$/yr)	e 1a Other Savings Type 1: Diesel (MMBłu/yr)	e2a Other Savings Type 1: Diesel (\$/yr)	e 1b Other Saving: Type 2: Heating Oil (MMBtu/yr)	e2b Other Savings Type 2: Heating Oil (\$/yr)	f = 0.003412*b1+ d1+e1a+e1b Total energy savings (MMBtu/yr) - - - - -	g = b2+c2+d2+e2 a+e2b Total energy cost savings (\$/yr) \$0 \$0 \$0 \$0 \$0	k h Water saving (Kgal/yr)	i S Water savings (\$/yr)	j O&M cost savings (\$/yr)	k Other non- energy cost savings (\$/yr)	I = g+i+j+k Estimated annual cost savings (\$/yr) \$0 \$0 \$0 \$0 \$0 \$0 \$0	m Implementation price (\$) \$0	n = m/l Simple Payback (years)
259			b1 Electric energy savings (kWh/yr)	b2 Electric energy savings (\$/yr)	c1 Electric demand savings (kW/mo)	c2 Electric demand savings (\$/yr)	d1 Natural gas savings (MMBtu/yr)	d2 Natural gas savings (\$/yr)	e 1a Other Savings Type 1: Diesel (MMBłu/yr)	e2a Other Savings Type 1: Diesel (\$/yr)	e 1b Other Saving: Type 2: Heating Oil (MMBtu/yr)	e2b Other Savings Type 2: Heating Oil (\$/yr)	f = 0.003412*b1+ d1+e1a+e1b Total energy savings (MMBtu/yr) (MMBtu/yr)	g = b2+c2+d2+e2 a+e2b Total energy cost savings (\$/yr) \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	k h Water saving (Kgal/yr)	i S Water savings (\$/yr)	j O&M cost savings (\$/yr)	k Other non- energy cost savings (\$/yr)	I = g+i+j+k Estimated annual cost savings (\$/yr) \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	m Implementation price (\$) \$0	n = m/l Simple Payback (years)
259			b1 Electric energy savings (kWh/yr)	b2 Electric energy savings (\$/yr)	c1 Electric demand savings (kW/mo)	c2 Electric demand savings (\$/yr)	d1 Natural gas savings (MMBtu/yr)	d2 Natural gas savings (\$/yr)	e 1a Other Savings Type 1: Diesel (MMBłu/yr)	e2a Other Savings Type 1: Diesel (\$/yr)	e 1b Other Saving: Type 2: Heating Oil (MMBtu/yr)	e2b Other Savings Type 2: Heating Oil (\$/yr)	f = 0.003412*b1+ d1+e1a+e1b Total energy savings (MMBtu/yr) (MMBtu/yr) - - - - - - - - - - - - - - - - - - -	g = b2+c2+d2+e2 a+e2b Total energy cost savings (\$/yr) \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	k h Water saving (Kgal/yr)	i Water savings (\$/yr)	j O&M cost savings (\$/yr)	k Other non- energy cost savings (\$/yr)	I = g+i+j+k Estimated annual cost savings (\$/yr) \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	m Implementation price (\$) \$0	n = m/l Simple Payback (years)

#### Schedule 4g: Estimated GHG Savings by ECM

- Indicate the eGrid State Region for each ECM (column C).
- For ECMs outside the U.S., choose "U.S. Default" and provide a more accurate emission value in the notes and the application, including an explanation of the methodology and assumption used.
- For U.S. based projects, do not adjust accounting for CFE. You may add notes on an alternative calculation methodology and impact on emissions.
- The Scope 1 and Scope 2 estimated emissions impacts will calculate automatically.

	Α	В	C	-	D	E	F	G	н	1	J	K	L	M	N	0	P	Q	R	S	Т
1 2						GHG	EMISSIO	SCI NS BY ENI	HEDULE #4 RGY CON	g ISERVATIO	N MEASU	RE									
3																					
4		ECM			ы			dl			ela			elb			f= 0.003412*b1 +d1+e1a+e1 b	h			
5	ECM Number	Short Description	eGrid Region ( from	State choose list)	Electric energy savings	kg CO2e/Mmbtu	Electric GHG	Natural gas savings	kg CO2e/MMBtu	Natural gas GHG	Other Savings Type 1: Diesel	kg CO2e/MMBt v	Other Savings Type 1: Diesel	Other Savings Type 2: Heating Oil	kg CO2e/MMBł u	Other Savings Type 2: Heating Oil	Total energy savings	Water savings	Annual Scope 1 CO2e Reductions	Annual Scope 2 CO2e Reductions	Annual Total CO2e Reductions
6					(kWh/yr)		kg CO2e	(MMBtu/yr)		kg CO2e	(MMBtu/yr)		kg CO2e	(MMBtu/yr		kg CO2e	(MMBtu/yr)	(Kgal/yr)	kg CO2e	kg CO2e	kg CO2e
7		Project Development Price (PDP)- Technical Energy Audit and Project Proposal																			
8			Select R	egion	0	118	0	0	53	0	0	118	0	0	74	0	-	0	0	0	0
9			Select R	egion	0	118	0	0	53	0	0	118	0	0	74	0	-	0	0	0	0
253			Select R	egion	0	118	0	0	53	0	0	74	0	0	74	0	-	0	0	0	0
254			Select R	egion	0	118	0	0	53	0	0	74	0	0	74	0	-	0	0	0	0
255			Select R	egion	0	118	0	0	53	0	0	74	0	0	74	0	-	0	0	0	0
256			Select R	egion	0	118	0	0	53	0	0	74	0	0	74	0	-	0	0	0	0
257			Select R	egion	0	118	0	0	53	0	0	74	0	0	74	0	-	0	0	0	0
258		TOTALS:			0		0	0		0	0		0	0		0	0	0	0	0	0

## **Project Examples with the ePB Template**



#### **Examples**

The following section presents examples of how to complete the ePB template for four different common types of projects:

- Guaranteed Savings (GS): Energy Savings Performance Contracts (ESPC), ESPC ENABLE
- Utility Energy Service Contracts (UESC)
- ESPC Energy Sales Agreements (ESA)
- Direct-Funded

# *Example* GS (e.g. ESPCs, ENABLE)

### **GS Summary Schedule**

- An example of Summary Schedule when the Project Agreement Type is "Guaranteed Savings."
- Note cell C4 is orange, indicating that you will use the orange-colored tab Schedule 1.
- Complete as many fields as possible, especially all fields with red text as they are needed for the amortization calculations.
- Note that some of the grey auto-populated fields will not populate correctly until all of the other required fields in the other tabs are completed. (e.g., Performance Period, cell C27, and the cells in the lower right, "Project Financial Summary").
- This is an example without the grant that exceeds the 25 year constraint. If the Implementation Period plus Performance Period total more than 25 years, an error message will appear in the lower right under "Template Errors/Warnings" – as it does in this case.

Agreement Type	(choose from list)*	Guaranteed Savings					
, green () pe			_				
	Role	Institution	Name	Title	Email	Phone	
	Project Facilitator						
	Customer	Department of Energy	Jane Smith	Contracting Officer	JS@doe.gov	(123) 123-1234	
Project Contact Information	Contractor	ESCO ABC	Mary Worth	Project Lead	MW@ESCOABC.com	(789) 789-7892	
	Finance Specialist						
	Primary Financier						
			-				
1	Project Ide	ntification			Project Cho	aracteristics	
	Task/Purchase Order #				List of Sites in Project (separated by commas)	Site A, Site B, Site C	
	Contract #				Number of Buildings in Project	5	
	Project Name				List of Buildings in Project (separated by commas)	Bigd A, Bidg B, Bidg C, Bidg D	
Project	Primary Project Location-City				Market Segment		
Identification & Characteristics	Primary Project Location-State				Total Floor Area Affected by project (Square Feet)	4,290,916	
	Primary Project Location-Zipcode				Average Annual Energy Consumption of Affected Buildings (MMBtu/yr)	268,767	
	Agency Name*	Department of Energy			Implementation Period (months)*	18	
-	Sub Agency Name/Region		-		Federal M&V Version	FEMP 4.0	
	Project ID #		<u>_</u>				
-							
5	Financin	g Terms			Project Co	apitalization	
5	Applicable Financial Index	US Treasury	_		Total Implementation Price (from Schedule-2a Total)	\$31,335,774	
7	Performance Period (years)	25			capitalized construction period interest (\$)*	\$401,979	
3	Index Rate*	3.76%			other expenses (\$)*	\$0	
9	Added Premium (adjusted for tax incentives)*	2.50%			LESS Implementation Period Payments (from Schedule-1, (c))	\$1,000	
Costs &	Project Interest Rate (sum of two above inputs)	6.26%			Total Amount Financed (principal)	\$31,736,753	
Financials	Financing Issue Date	1/15/2024			Bonded Amount	\$5,300,694	
2	Project Award Date (mm/dd/yyyy)*	1/15/2024			Start date of Performance Period (mm/dd/yyyy)	1/15/2026	
3	Effective Through (mm/dd/yyyy)	3/15/2024					
1	Primary Type of Financing (choose from list)	Loan (ESCO)			Project Fina	ncial Summary	
5	Secondary Type of Financing (choose from list)			_	Annual Estimated Energy Savings (MMBtu)	211,979	
	Payment Timing*	Beginning	Annual		Annual Estimated Water Savings		
5	1				Total Estimated Cost Savings	\$70,778,348	
5		95.00%			Total Guaranteed Cost Savinas	\$67,239,483	
7	Guarantee % of Estimated Savings*				Total Payments	\$1,000	
3	Guarantee % of Estimated Savings* Federal Contract Type						
3 3 3 0 0 0 0	Guarantee % of Estimated Savings* Federal Contract Type Primary Electric Utility	Xcel Energy					
3 3 9 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Guarantee % of Estimated Savings* Federal Contract Type Primary Electric Utility Primary Natural Gas Utility	Xcel Energy Xcel Energy - Distribution Constellation - Commodity			Template Er	rors/Warnings	

#### Without Grant

#### **GS Escalation Rates**

- Row 5 should include the escalation rate for the implementation period PLUS year 1 of the performance period.
- Indicate any other fuels in columns E and F; choose from the dropdown list in cells E4 and F4. These are important for correct calculations of the GHG impacts of your project.
- RECENT ePB update: the Escalation Rates enables entry for up to 40 years, so that users can try different scenarios that may not pencil out within the 25 year limit for federal ESPC projects, and still have the amortization calculations within the initial 25 years be accurate.

	A	В	С	D	E	F	G	н	I
1		ANNUA		RSAVIN	GS ESCALAT	ION RATES			
2	<u> </u>								
_									
					Other Savings				
		Electric	Electric	Natural	Type 1:	Other Savings			Other Non-
4	Performance Period (year)	Energy	Demand	Gas	Heating Oil	▼ pe 2: Other	Water	O&M	Energy Savings
5	Implementation start through first year	5.00%	3.51%	6.28%	3.51%	po al onici	6.09%	6.09%	Linergy outnings
6	2	2.26%	1.74%	3.09%	1.74%		3.00%	3.00%	
7	3	2.26%	1.74%	3.09%	1.74%		3.00%	3.00%	
8	4	2.26%	1.74%	3.09%	1.74%		3.00%	3.00%	
9	5	2.27%	1.74%	3.09%	1.74%		3.00%	3.00%	
10	6	2.27%	1.74%	3.09%	1.74%		3.00%	3.00%	
11	7	2.28%	1.74%	3.09%	1.74%		3.00%	3.00%	
12	8	2.28%	1.74%	3.09%	1.74%		3.00%	3.00%	
13	9	2.28%	1.74%	3.09%	1.74%		3.00%	3.00%	
14	10	2.29%	1.74%	3.09%	1.74%		3.00%	3.00%	
15	11	2.29%	1.74%	3.09%	1.74%		3.00%	3.00%	
16	12	2.29%	1.74%	3.09%	1.74%		3.00%	3.00%	
17	13	2.30%	1.74%	3.09%	1.74%		3.00%	3.00%	
18	14	2.30%	1.74%	3.09%	1.74%		3.00%	3.00%	
19	15	2.31%	1.74%	3.09%	1.74%		3.00%	3.00%	
20	16	2.31%	1.74%	3.09%	1.74%		3.00%	3.00%	
21	17	2.31%	1.74%	3.09%	1.74%		3.00%	3.00%	
22	18	2.32%	1.74%	3.09%	1.74%		3.00%	3.00%	
23	19	2.32%	1.74%	3.09%	1.74%		3.00%	3.00%	
24	20	2.33%	1.74%	3.09%	1.74%		3.00%	3.00%	
25	21	2.33%	1.74%	3.09%	1.74%		3.00%	3.00%	
26	22	2.33%	1.74%	3.09%	1.74%		3.00%	3.00%	
27	23	2.33%	1./4%	3.09%	1./4%		3.00%	3.00%	
28	24	2.33%	1./4%	3.09%	1.74%		3.00%	3.00%	
29	25	2.33%	1.74%	3.09%	1.74%		3.00%	3.00%	
30	20	2.33%	1.7476	3.09%	1.74%		3.00%	3.00%	
31	2/	2.0076	1.7470	3.09%	1.7470		3.00%	3.00%	
22	20	2.0076	1.7470	3.0976	1.7470		3.00%	3.00%	
24	30	2.00%	1.74%	3.00%	1.7470		3.00%	3.00%	
25	31	0.3302	1.74%	3.09%	1.74%		3.00%	3.00%	
35	32	2.33%	1.74%	3.09%	1.74%		3.00%	3.00%	
37	33	2.33%	1.74%	3.09%	1.74%		3.00%	3.00%	
38	34	2.33%	1.74%	3.09%	1.74%		3.00%	3.00%	
39	35	2.33%	1.74%	3.09%	1.74%		3.00%	3.00%	
40	36	2.33%	1.74%	3.09%	1.74%		3.00%	3.00%	
41	37	2.33%	1.74%	3.09%	1.74%		3.00%	3.00%	
42	38	2.33%	1.74%	3.09%	1.74%		3.00%	3.00%	
43	39	2.33%	1.74%	3.09%	1.74%		3.00%	3.00%	
44	40	0.000	1 7 497	2.000	1 7 497		2.000	2.000	

#### **GS Schedule 1: Cost Savings & Payments**

•	Schedule 1
	automatically
	calculates annual
	savings and
	payments and the
	performance
	period (number of
	years).

 In the example without the grant, the Annual Payments column indicates the term is greater than 25 years, as we saw on the Summary Schedule.

#### Without Grant

1.1		в	C	U	-		A	В	C	D	E
ſ			SCHEDULE #1			1			SCHEDULE #1		1
5		COST	SAVINGS AND PAYM	ENTS	<u> </u>	2		COST	SAVINGS AND PAYM	ENTS	
	l	(a)	(Ь)	(c)		3		(a)	ம	(e)	7
հ	mplementation Period (Year M)	Estimated Cost Savings*	Guaranteed Cost Savings"	Payments"		-	Implementation Period	Estimated Cost Savings"	Guaranteed Cost	Payments"	1
	(10010)	\$1,000	\$1,000	\$1,000		6	(Year U)	\$1,000	5avings \$1000	\$1.000	
	Performance Period	(d)	(e)	(f)	(g)	7		(d)	(e)	000 <u>0</u> (f)	fa)
	(Year)	Estimated Annual Cost Savings	Guaranteed Annual Cost Savings	Annual Payments	Annual Dollar Savings Retained by Customer	8	Performance Period (Year)	Estimated Annual Cost Savings	Guaranteed Annual Cost Savings	Annual Payments	Annual Dollar Sav Retained by Custo
L	1	\$2,114,509	\$2,008,784	Term>25Yrs		9	1	\$2,114,509	\$2,008,784	\$2,008,783	\$1
	2	\$2,162,847	\$2,054,704	Term>25Yrs		10	2	\$2 162 847	\$2 054 704	\$2,054,703	\$1
L	3	\$2,212,450	\$2,101,828	Term>25Yrs		11	3	\$2,12,450	\$2,001,00	\$2,101,827	\$1
	4	\$2,263,354	\$2,150,187	Term>25Yrs		12	4	\$2,263,354	\$2,150,187	\$2,150,186	\$1
	5	\$2,315,596	\$2,199,816	Term>25Yrs		12	5	\$2,200,004	\$2,100,101	\$2,139,815	\$1
	6	\$2,369,212	\$2,250,751	Term>25Yrs		14	6	\$2,369,212	\$2,155,515	\$2,155,015	
	7	\$2,424,240	\$2,303,028	Term>25Yrs		10	7	\$2,000,212	\$2,230,131	\$2,200,100	<u>با</u> 41
	8	\$2,480,720	\$2,356,684	Term>25Yrs		10		\$2,424,240	\$2,303,020 \$2.256,604	\$2,303,021 \$2.355,600	¢1
	9	\$2,538,691	\$2,411,757	Term>25Yrs		10	0	\$2,400,120 \$3,530,601	¢2,330,004	\$2,330,003 \$2,411,7EC	\$1 
	10	\$2,598,197	\$2,468,287	Term>25Yrs		17	10	♦2,330,031 ♦3,500,407	\$2,411,131 \$3,400,007	\$2,411,100 \$2,460,000	41 (A)
	11	\$2,659,279	\$2,526,315	Term>25Yrs		18	11	♦2,000,101 ¢0,050,000	\$2,460,207	\$2,400,200 \$2,500,014	۱۴ ۸۱
	12	\$2,721,981	\$2,585,882	Term>25Yrs		19	10	\$2,003,213	\$2,520,315	\$2,525,314	\$1 
	13	\$2,786,348	\$2,647,031	Term>25Yrs		20	12	\$2,721,981	\$2,585,882	\$2,585,881	\$1
	14	\$2,852,428	\$2,709,807	Term>25Yrs		21	13	\$2,786,348	\$2,647,031	\$2,647,030	\$1
	15	\$2,920,268	\$2,774,255	Term>25Yrs		22	14	\$2,852,428	\$2,709,807	\$2,709,806	\$1
	16	\$2,989,918	\$2,840,422	Term>25Yrs		23	15	\$2,920,268	\$2,774,255	\$2,774,254	\$1
	17	\$3,061,427	\$2,908,356	Term>25Yrs		24	16	\$2,989,918	\$2,840,422	\$2,840,421	\$1
	18	\$3,134,849	\$2,978,107	Term>25Yrs		25	17	\$3,061,427	\$2,908,356	\$2,908,355	\$1
	19	\$3,210,238	\$3,049,726	Term>25Yrs		26	18	\$3,134,849	\$2,978,107	\$2,978,106	\$1
	20	\$3,287,647	\$3,123,265	Term>25Yrs		27	19	\$3,210,238	\$3,049,726	\$2,316,780	\$732,946
	21	\$3,367,136	\$3,198,779	Term>25Yrs		28	20				
Г	22	\$3,448,710	\$3,276,275	Term>25Yrs		29	21				
Γ	23	\$3,532,428	\$3,355,806	Term>25Yrs		30	22				
	24	\$3,618,347	\$3,437,430	Term>25Yrs		31	23				
	25	\$3,706,527	\$3,521,201	Term>25Yrs		32	24				
[	Total Performance Period:	\$70,777,348	\$67,238,483	\$0	\$0	33	25 Total Performance	#49 010 EE2	\$47.92E.727	<b>♦</b> 40 E92 702	\$722.9E4
	Total Implementation	n & Performance Period	Total Guaranteed Cost Savings (b+e)	Total Payments (c+f)	_	49 50	Period:	+43,010,333	Total Guaranteed Cost	Total Payments (c+f)	+132,304
1			\$67,239,483	\$1,000		51	Total Implementatio	n & Performance Period	Savings (b+e)		

### **GS Schedule 2a: Implementation Price by ECM**

#### Schedule 2a is where you create two different scenarios/different template versions.

- Enter all project ECMs, each on its own row; complete all possible fields.
- For the ECM(s) that the grant will apply to:
  - For the scenario that shows the grant, put the grant amount(s) in the "Applied Incentives" column.
  - If the ECM is included in both \_ scenarios (with and without the grant) - but the ECM will be different (e.g., a different size), make sure to adjust all of the applicable information fields accurately.
  - If the ECM(s) for the grant version is/are going to be ADDED to the non-grant version, add it/them on their own row(s).

ith	n Grant								Grant e	entered h	ere:	
1 2		В	с	D IMPLEMENTATION	E SCI PRICE BY	F HEDULE #2 ENERGY (	g a CONSERVATI	H ON MEASUR	I RE	, ,	К	L
3 4 5 6 7	ECM - Technology Calegory*	ECM No.	Not Applicable	ECM Description – Title*	ECM Size	ECM Coverage (%)	Location/Facilit y ID	M&V Expense (\$)	(a) Cost of Goods and Services (Base Construction)*	(b) F ject Implet intati Delivery hargi	( c ) Applied Incentives (\$)	( d ) Implementation Price PDP + [a+b] - c
8				Project Development Price (PD	P)-Technical	Energy Audit a	nd Project Propo	sal				\$228,416
9	Solar PV	11B	No	Solar PV	13.9 MW	99.00%	Campus	\$20,000	\$5,529,115	\$200,700	\$2,000,000	\$3,729,815
10	Heating, Ventilating, and Air Conditioning (HVAC)	4A	No	Replace Leaking VAV Couplings in B95			B95	\$10,000	\$1,112,000	\$500,000	\$0	\$1,612,000
11	Heating, Ventilating, and Air Conditioning (HVAC) Improvements	4B	No	Laboratory Air Chang <del>e</del> Optimization	2.32		B25, B95	\$20,000	\$123,219	\$46,301	\$0	\$169,520
12	Geothermal	11A	No	Geothermal	2323	23.00%	Campus	\$20,000	\$2,438,458	\$7,369,715	\$3,000,000	\$6,808,174
13	Electric Motors and Drives	8B	No	Notched Fan Belts	56 belts		Campus	\$3,000	\$11,200	\$4,194	\$0	\$15,394
14	Geothermal	11A	No	Geothermal	2323	23.00%	Campus	\$20,000	\$2,438,458	\$7,369,715	\$0	\$9,808,174
258												
259			TOTALS:					\$126,273	\$14,536,731	\$16,570,626	\$5,000,000	\$26,335,774

#### Without Grant

	A	В	С	D	E	F	G	Н	I	J	К	L
1 2				IMPLEMENTATION	SCI I PRICE BY	HEDULE #20 ENERGY C	a CONSERVATIO	ON MEASURI	=			
3 4 5			Energy Sales			ECM	Location /Eacilit		( a )	(b)	( c )	( d )
6 7	ECM - Technology Category*	ECM No.	Agreement (ESA)?	ECM Description – Title*	ECM Size	Coverage (%)	y ID	(\$)	Cost of Goods and Services (Base Construction)*	Project Implementation Delivery Charge*	Applied Incentives (\$)	Implementation Price PDP + [a+b] - c
8				Project Development Price (PDI	P)-Technical E	nergy Audit an	nd Project Proposa	I			_	\$228,416
9	Solar PV	11B	No	Solar PV	13.9 MW	99.00%	Campus	\$20,000	\$5,529,115	\$200,700	\$0	\$5,729,815
10	Heating, Ventilating, and Air Conditioning (HVAC) Improvements	4A	No	Replace Leaking VAV Couplings in B95			B95	\$10,000	\$1,112,000	\$500,000	\$0	\$1,612,000
11	Heating, Ventilating, and Air Conditioning (HVAC) Improvements	4B	No	Laboratory Air Change Optimization	2.32		B25, B95	\$20,000	\$123,219	\$46,301	\$0	\$169,520
12	Geothermal	11A	No	Geothermal	2323	23.00%	Campus	\$20,000	\$2,438,458	\$7,369,715	\$0	\$9,808,174
13	Electric Motors and Drives	8B	No	Notched Fan Belts	56 belts		Campus	\$3,000	\$11,200	\$4,194	\$0	\$15,394
14	Geothermal	11A	No	Geothermal	2323	23.00%	Campus	\$20,000	\$2,438,458	\$7,369,715	\$0	\$9,808,174
258												
259			TOTALS:					\$126,273	\$14,536,731	\$16,570,626	\$0 <b>(</b>	\$31,335,774

### **GS Schedule 3: Performance Period Cash Flow**

- Complete all applicable rows on Schedule 3 for all years of the contract term.
- Make sure to complete the rows in red text.
- Recent ePB update: Schedule 3 enables entry for up to 40 years, so that users can try different scenarios that may not pencil out within the 25 year limit for federal ESPC projects, and still allow the amortization calculations to be accurate.
- Notice the "Without Grant" version has higher total principal, interest, and total of annual payments (as on Schedule 1).

1 2									
3		Term (year)	Implementation Period (Year N)	1	2	3	39	40	Totals
5		Principal Repayment		\$72,696	\$119,441	\$170,360	\$0	\$0	\$31,736,751
6	Debt	Performance Period Incentives and Other Revenues		\$0	\$0	\$0	\$0	\$0	\$0
7	Service/Performance Period Payments	Dollar savings retained by customer		\$1	\$1	\$1	\$1	\$1	
8	]	Interest (\$)		\$1,916,563	\$1,909,333	\$1,899,022	\$0	\$0	\$32,855,341
9		Total Debt Service (a)		\$1,989,259	\$2,028,774	\$2,069,382	\$0	\$0	\$64,592,092
10									
11		Management/Administration		\$5,269	\$5,408	\$5,551			\$163,772
12		Operation		\$0	\$0	\$0			\$0
13		Maintenance		\$0	\$0	\$0			\$0
14		Repair and Replacement		\$0	\$0	\$1,000			\$12,000
15				\$10,700	\$15,800	\$19,985			\$676,081
16		Other PP Expense 1: Other							\$0
17	Performance Period	Other PP Expense 2: Other							\$0
18	Expenses	SUBTOTAL Before Application of Performance Period Delivery Parcentane		\$15,969	\$21,208	\$26,537	\$0	\$0	\$851,854
19		Performance Period Delivery Percentage (%)"		22.26%	22.26%	22.26%			
20		Performance Period Delivery Charge (\$1		\$3,555.00	\$4,721.00	\$5,908.00	\$0.00	\$0.00	\$172,926
~		TOTAL Performance Period Price		\$19.524	\$25,929	\$32,445	\$0	\$0	\$1.024.781
21		/5/							
22									
23	Annual Cash Flow (Performance Period)	TOTAL - ANNUAL PAYMENTS (a,i+(b)	\$1,000	\$2,008,783	\$2,054,703	\$2,101,827	\$0	\$0	\$65,616,873

#### Without Grant

- 41	A	В	C	D	E	F	AP	AQ	AR
1									
3									
4		Term (year)	Implementation Period (Year 0)	1	2	3	39	40	Totals
5		Principal Repayment		\$394,835	\$462,334	\$535,345	\$0	\$0	\$26,736,752
6	Debt	Performance Period Incentives and Other Revenues		\$0	\$0	\$0	\$0	\$0	\$0
7	Service/Performance Period Payments	Dollar savings retained by customer		\$1	\$1	\$1	\$1	\$1	
8		Interest (\$)		\$1,594,424	\$1,566,440	\$1,534,037	\$0	\$0	\$19,136,204
9		Total Debt Service (a)		\$1,989,259	\$2,028,774	\$2,069,382	\$0	\$0	\$45,872,956
10									
11		Management/Administration		\$5,269	\$5,408	\$5,551			\$163,772
12		Operation		\$0	\$0	\$0			\$0
13		Maintenance		\$0	\$0	\$0			\$0
14		Repair and Replacement		\$0	\$0	\$1,000			\$12,000
15		Heasurement and		\$10,700	\$15,800	\$19,985			\$676,081
16		Other PP Expense 1: Other							\$0
7	Performance Period	Other PP Expense 2: Other							\$0
18	Expenses	SUBTOTAL Before Application of Performance Period Delivery Percentane		\$15,969	\$21,208	\$26,537	\$0	\$0	\$851,854
19		Performance Period Delivery Percentage (%)"		22.26%	22.26%	22.26%			
20		Performance Period Delivery Charge (\$)		\$3,555.00	\$4,721.00	\$5,908.00	\$0.00	\$0.00	\$172,926
21		TOTAL Performance Period Price		\$19,524	\$25,929	\$32,445	\$0	\$0	\$1,024,781
21		IDI	L						
	Annual Cash Flow (Performance Period)	TOTAL - ANNUAL PAYMENTS (a)+(b)	\$1,000	\$2,008,783	\$2,054,703	\$2,101,827	\$0	\$0	\$46,592,763
23									
24									

#### **GS Schedule 4: Estimated Savings by ECM**

- Complete the baseline information (columns E N, as applicable) see upper figure below.
- Complete all annual estimated savings (columns O X and AA AD, as applicable) see lower figure below.
- Column AG automatically calculates simple payback; a metric used for AFFECT grant evaluation.

1	A	В	С	D	E	F	G	Н		l .	J	( L	M	N							
2												FIR	ST YEAR ESTI	MATED COS	<u>ST S.</u>						
3					T																
4		ECM						Bas	seline Energy an	d Non-energy C	onsumption										
5	ECM Number	Short Description	Location/Faci ID	lity First Year M&\ Option*	Baseline electricity u	se Baseline electricity demand	Baseline natural gas use	Baseline Use Heating Oi	e: Baseline I	Use: Other Ba wat	seline energ er use reso co	eline y and Baseline urce cos ists	e O&M ts energy c	e Type of oth n- non-energ osts costs	ner Jy						
6		Project Development Price (PDP)- Technical Energy Audit and Project			(KWII/yr)	(KW/MO)	(MMBI0/91)	(MMBIU/yr)	) (/////	(KC	(3/	yı) (3/)	(3/91)			\\/itho		<b></b>			
7	110	Proposal			1		01.400	0/ 870			too	0/7				VVILIIO	out Gra	nu			
ہ 9	4A	Solar PV Replace Leaking VAV Couplings in B95	B95	Option A Option A			17.812	26,073			\$109	2.092			-+						
10	4B	Laboratory Air Change Optimization	B25, B95	Option A			15,374	2,701			\$128	3,973									
11	11A	Geothermal	Campus	Option A				4,729			\$60	,969			<u> </u>						
12	8B	Notched Fan Belts	Campus	P P	Q	R	s	14.106 T	U	v	W \$181	861 X	Y	z	AA	AB	AC	AD	AE	AF	AG
14	8A	EC Motors and VEDs	SCHEDU	LE #4					1					1				1			
15	12	High Efficiency Transformers	AVINGS B	ENERGY C	ONSERV		ASURE														
56																					
57 58 59		TOTALS:	ь1	b2	c1	c2	d1	d2	e1a	e2a	e1b	e2b	f = 0.003412°b 1+d1+e1a+e	g = b2+c2+d2+ e2a+e2b	h	i	i	k	l = g+i+j+k	m	n = m/l
			Electric energy savings	Electric energy savings	Electric demand savings	Electric demand savings	Natural gas savings	Natural gas savings	Other Savings Type 1: Heating Oil	Other Savings Type 1: Heating Oil	Other Savings Type 2: Other	Other Savings Type 2: Other	Total energy savings	Total energy cost savings	¥ater savings	₩ater savings	O&M cost savings	Other non- energy cost savings	Estimated annual cost savings	Implementatio n price	Simple Payback
			(k₩hłyr)	(\$/yr)	(k₩/mo)	(\$/yr)	(MMBtulyr)	(\$/yr)	(MMBtu/yr)	(\$łyr)	(MMBtulyr)	(\$/yr)	(MMBtu/yr)	(\$/yr)	(Kgallyr)	(\$/yr)	(\$/yr)	(\$/yr)	(\$/yr)	(\$)	(years)
																				\$228,416	
							403	\$2,623	3,190	\$42,567			3,593	\$45,190					\$45,190	\$5,729,815	126.79
							7,431	\$48,372	974	\$U \$12,992			6,431	\$48,372					\$48,372	\$1,612,000 \$169,520	33.33
							5,551	\$30,042	3.934	\$12,550			3,934	\$51,640					\$51,640	\$105,520	186.82
									576	\$7,683			576	\$7,683					\$7,683	\$15,394	2.00
			-350,594	-\$15,427	4,856	\$48,335	101,286	\$620,356			23,060	\$134,068	123,150	\$787,332					\$787,332	\$9,808,174	12.46
			17,502,953	\$846,173	16,680	\$166,018							59,720	\$1,012,191					\$1,012,191	\$285,197	0.28
					2,006	\$20,667			6,664	\$88,932			6,664	\$109,599					\$109,599	\$3,679,084	33.57
													-	\$0					\$0		
		-	17 152 359	\$830 746	23 542	\$235.020	115 057	\$709 993	15 338	\$204 682	23 060	\$134.068	211.979	¥U \$2 114 509	0	\$0	1 <b>±</b>	\$0	¥U \$2 114 509	\$31 335 774	14.82
			11,102,000	+000,140	20,072	4200,020	115,051	+100,000	10,000	- +204,002	20,000	104,000	211,010	42,114,000	· ·	1 40	- <del>-</del> -	1 40	42,114,000	101,000,114	14.02

### **GS Schedule 4: Estimated Savings by ECM**

- In the version with the grant applied to the Solar PV and Geothermal ECMs (as seen on Schedule 2a), the Implementation Price and the Simple Payback are reduced for the ECMs and thus the project (columns AF and AG, in the bottom screenshot).
- In this example, the annual estimated savings are the same with and without the grant because the ECMs are the same; illustrating how the grant can help the project pencil out within the 25 year maximum (as seen on Schedule 1).
- In other projects, the grant could be used for additional or larger ECMs with more savings; in such cases, Schedule 4 would show different savings with and without the grant (and in turn, Schedule 4g would show different GHG impacts).

Image: Construction of the point of the	
ECM     Baseline     Baseline </th <th></th>	
For the non- of th	
ELM Number     Short Description     ity ID     M&V Option*     use     demand     use     reating Uil     Uther     water use     resource     U&M costs     energy     energy     energy       5     c     c     c     c     costs     costs     costs     costs	
	AF AG
7 Project Development Price (PDP)-Technical Energy Audit and Project Proposal SCHEDULE #4 AVINGS BY ENERGY CONSERVATION MEASURE	
8 TIB Solar PV Lampus	
9 44 Replace Leaving VAV Louplings in B35 B35	
$\frac{10}{45} - \frac{45}{100} - \frac{100}{100} - 1$	m n=m/l
11 TIA Geothemal Campus Finit Finit Finit Finit Coher Other Other Other Coher Coher Coher Finite Finit	
12 OB Notched Fan Belts Lampus Electric Electric Electric Electric Electric Ratural gas Natural gas Savings Savings Savings Savings energy energy energy energy and an and demand	plementatio Simple
13 The Geothermal Campus starings savings savi	n price Payback
14 8A EC Motors and VFDs Campus (kVb/ur) (\$/ur) (kVm) (\$/ur) (MMBru/ur) (\$/ur) (MMBru/ur) (\$/ur) (MMBru/ur) (\$/ur) (Koal/ur) (\$/ur) (\$/	(\$) (vears)
15 12 High Efficiency Transformers Campus Corps	(v) (years)
256	\$228,416
257 402 42 522 2 190 442 557 2 522 445 190 442 557	40 709 OIE 00 E4
258 TOTALS: 403 42,023 5,00 442,001 5,003 445,00 44	\$1,612,000 33,33
5,937 \$38,642 974 \$12,998 6.01 \$51,640 \$51,640 \$51,640	\$169,520 3.28
<b>1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 </b>	\$6,808,174 129.67
\$7,683 \$7,683 \$7,683 \$7,683 \$7,683 \$7,683 \$7,683 \$7,683 \$	\$15,394 2.00
-350,594 -\$15,427 4,856 \$48,335 101,286 \$620,356 23,060 \$134,068 123,150 \$787,332 \$\$787,332 \$\$787,332	\$9,808,174 12.46
17,502,353 \$846,173 16,680 \$166,018 53,720 \$1,012,191 \$1,012,191	\$285,197 0.28
2,006         \$20,667         6,664         \$88,932         6,664         \$109,599         \$109,599	\$3,679,084 33.57
\$0 \$0 \$0	
17,152,359   \$830,746   23,542   \$235,020   115,057   \$709,993   15,338   \$204,682   23,060   \$134,068   211,979   \$2,114,509   0   \$0   \$0   \$0   \$0   \$0   \$0   \$	<b>:6,335,774</b> 12.45

### **GS Schedule 4g: Estimated GHG Savings by ECM**

- When completing Schedule 4g, indicate the eGrid State Region for each ECM in column C. For locations outside the U.S., choose "U.S. Default."
- In this example, Schedule 4g does not change between the version with and without the grant, because the two different scenarios contain the same ECMs; the grant is used here to help the project to pencil within the 25 year maximum.
- In other projects where the grant supports more or larger ECMs with more savings, schedule 4g would show different GHG impacts between the 2 scenarios.

- 24	Α	В	С	D	E	F	G	H	l I	J	K	L	M	N	0	P	Q	R	S	T
1 2					GHG	EMISSION	SCHEL S BY ENERG	DULE #4g GY CONSER		EASURE										
4		ECM		bl			d1			ela			elb			f = 0.003412*b1+ d1+e1a+e1b	h			
5	ECM Number	Short Description	eGrid State Region (Add a drop down showing the	Electric energy savings	kg CO2e/Mmbtu	Electric GHG	Natural gas savings	kg CO2e/MMBtu	Natural gas GHG	Other Savings Type 1: Heating Oil	kg CO2e/MMBtu	Other Savings Type 1: Heating Oil	Other Savings Type 2: Other	kg CO2e/MMBtu	Other Savings Type 2: Other	Total energy savings	Water savings	Annual Scope 1 CO2e Reductions	Annual Scope 2 CO2e Reductions	Annual Total CO2e Reductions
6			regions)	(kWh/yr)		kg CO2e	(MMBtu/yr)		kg CO2e	(MMBtu/yr)		kg CO2e	(MMBtu/yr)		kg CO2e	(MMBtu/yr)	(Kgal/yr)	kg CO2e	kg CO2e	kg CO2e
7		Project Development Price (PDP)-Technical Energy Audit and Project Proposal																		
8	11B	Solar PV	WECC Rockies	0	166	0	403	53	21,405	3,190	166	530,127	0	0	0	3,593	0	551,532	0	551,532
9	4A	Replace Leaking VAV Couplings in B95	WECC Rockies	0	166	0	7,431	53	394,717	0	166	0	0	0	0	7,431	0	394,717	0	394,717
10	4B	Laboratory Air Change Optimization	WECC Rockies	0	166	0	5,937	53	315,343	974	166	161,863	0	0	0	6,911	0	477,206	0	477,206
11	11A	Geothermal	WECC Rockies	0	166	0	0	53	0	3,934	166	653,768	0	0	0	3,934	0	653,768	0	653,768
12	8B	Notched Fan Belts	WECC Rockies	0	166	0	0	53	0	576	166	95,722	0	0	0	576	0	95,722	0	95,722
13	11A	Geothermal	WECC Rockies	-350,594	166	-198,794	101,286	53	5,379,786	0	166	0	23,060	0	0	123,150	0	5,379,786	(198,794)	5,180,992
14	8A	EC Motors and VFDs	WECC Rockies	▼ 7,502,953	166	9,924,518	0	53	0	0	166	0	0	0	0	59,720	0	0	9,924,518	9,924,518
255			SPP North SPP South	^ 0	118	0	0	53	0	0	74	0	0	0	0	-	0	0	0	0
256			SERC Mississippi Valley	0	118	0	0	53	0	0	74	0	0	0	0	-	0	0	0	0
257			SERC Nidwest SERC South	0	118	0	0	53	0	0	74	0	0	0	0	-	0	0	0	0
258		TOTALS:	SERC Tennessee Valley SERC Virginia/Carolina	7,152,359		9,725,724	115,057		6,111,251	8,674		1,441,480	23,060		0	205,315	0	7,552,730	9,725,724	17,278,455
259		CORMATION:	U.S. Default	~																

# *Example* UESC

### **UESC Summary Schedule**

- Here's what the Summary Schedule looks when the Project Agreement Type is "UESC."
- Project Agreement Type field turns a plum color, which matches the color of the workbook tab for Schedule 1u – the version of Schedule 1 to use for UESC projects.
- Note that cell B38 now says"% Savings Devoted to Payments" instead of "Guarantee % of Estimated Savings" which we saw in the Guaranteed Savings version, since the ePB template assumes that UESC savings are not necessarily guaranteed.
- The template changes other terminology here and there to align with UESC (e.g., "Performance Assurance" instead of "M&V").

			BASIC PROJECT INFO	RMATION		
	1		-			
Agreement Type	Project Agreement Type (choose from list)*	UESC				
	1		-		1	
	Role	Institution	Name	Title	Email	Phone
	Project Facilitator					
	Customer	Department of Energy	Jane Smith	Contracting Officer	J\$@doe.gov	(123) 123-1234
Project Contact Information	Utility	ESCO ABC	Mary Worth	Project Lead	MW@E\$COABC.com	(789) 789-7892
	Primary FEMP Contact					
	Primary Financier					
	Proiect Ide	ntification			Proiect Ch	aracteristics
	Task/Purchase Order #				List of Sites in Project (separated by	Site A, Site B, Site C
	Contract #		-		commas) Number of Buildings in Project	5
	Project Name				List of Buildings in Project (separated	Blad A. Blda B. Blda C. Blda D. F
Project	Primary Project Location City		-		by commas) Market Segment	liga /, liag l, liag c, liag c,
Identification & Characteristics	Primary Project Location-State				Total Floor Area Affected by project (Square Feet)	4,290,916
	Primary Project Location-Zipcode				Average Annual Energy Consumption of Affected Buildings (MMBtu/yr)	268,767
	Agency Name*	Department of Energy			Implementation Period (months)*	18
	Sub Agency Name/Region		_		Federal M&V Version	FEMP 4.0
	Project ID #		_]			
	Financia	ng Terms			Project Co	apitalization
	Applicable Financial Index	US Treasury			Total Implementation Price (from Schedule-2a Total)	\$33,179,779
	Performance Period (years)	23			PLUS Financing Procurement Price- capitalized construction period interest (\$)*	\$401,979
	Index Rate*	2.00%			PLUS Financing Procurement Price-	\$0
-	Added Premium (adjusted for tax incentives)*	3.00%			LESS Implementation Period Payments (from Schedule-1, (c))	\$0
Costs & Financials	Project Interest Rate (sum of two above inputs)	5.00%			Total Amount Financed (principal)	\$33,581,758
	Financing Issue Date (mm/dd/yyyy)	1/15/2024			Bonded Amount	\$5,300,694
-	Project Award Date (mm/dd/yyyy)*	1/15/2024	_		Start date of Performance Period (mm/dd/yyyy)	7/15/2025
-	Effective Through (mm/dd/yyyy) Primary Type of Financing (choose	3/15/2024	_			
	from list)	Loan (ESCO)			Project Fina	ncial Summary
	seconaary Type of Financing (choose from list)				Annual Estimated Energy Savings (MMBtu)	211,979
	Payment Timing*	Beginning	Biannual		Annual Estimated Water Savings	
					Total Estimated Cost Savings	\$63,452,474
	% Savings Devoted to Payments*	95.00%			Total Guaranteed Cost Savings	\$0
-	Federal Contract Type				Total Payments	\$59,140,926
Other	Primary Electric Utility	Xcel Energy				
Information	Primary Natural Gas Utility	Xcel Energy - Distribution Constellation - Commodity	_		Template E	rrors/Warnings
	Primary Water Utility	Denver Water				

#### **UESC Schedule 1u: Cost Savings & Payments**

- Schedule 1u will mostly be automatically populated, and the contract term/performance period will be automatically calculated.
- For UESC projects, Schedule 1u excludes the "Guaranteed Annual Cost Savings" column that would be included for a guaranteed savings project. Otherwise, it is the same.
- Complete as many fields as possible, but make sure to complete all fields in red text, most of which are needed for the amortization calculations.
- Recent ePB update: If the user is experimenting with a scenario that goes beyond the 25 year limit for federal ESPC, Schedule 1 will still calculate accurately through year 25, though the Summary Schedule will indicate that the performance period exceeds the 25-year limit.
- Schedules, 2a, 3, 4 and 4g behave the same for UESC projects as for guaranteed savings, other than some terminology changes (e.g., "performance assurance" instead of "M&V").

	Α	в	С	D
1		SCHEDULE #1(	u) - UESC	
2		COST SAVINGS AN	D PAYMENTS	<u>, , , , , , , , , , , , , , , , , , , </u>
3				
4		(a)	(c)	
5	Implementation Period	Estimated Cost Savings*	Payments*	
6	(rearb)	\$1,000	\$1,000	
7	Performance Period	(d)	(f)	(g)
8	(Year)	Estimated Annual Cost Savings	Annual Payments	Annual Dollar Savings Retained by Customer
9	1	\$2,114,509	\$2,008,783	\$105,726
10	2	\$2,162,847	\$2,054,703	\$108,144
11	3	\$2,212,450	\$2,101,827	\$110,623
12	4	\$2,263,354	\$2,150,186	\$113,168
13	5	\$2,315,596	\$2,199,815	\$115,781
14	6	\$2,369,212	\$2,250,750	\$118,462
15	7	\$2,424,240	\$2,303,027	\$121,213
16	8	\$2,480,720	\$2,356,683	\$124,037
17	9	\$2,538,691	\$2,411,756	\$126,935
18	10	\$2,598,197	\$2,468,286	\$129,911
19	11	\$2,659,279	\$2,526,314	\$132,965
20	12	\$2,721,981	\$2,585,881	\$136,100
21	13	\$2,786,348	\$2,647,030	\$139,318
22	14	\$2,852,428	\$2,709,806	\$142,622
23	15	\$2,920,268	\$2,774,254	\$146,014
24	16	\$2,989,918	\$2,840,421	\$149,497
25	17	\$3,061,427	\$2,908,355	\$153,072
26	18	\$3,134,849	\$2,978,106	\$156,743
27	19	\$3,210,238	\$3,049,725	\$160,513
28	20	\$3,287,647	\$3,123,264	\$164,383
29	21	\$3,367,136	\$3,198,778	\$168,358
30	22	\$3,448,710	\$3,276,274	\$172,436
31	23	\$3,532,428	\$2,213,829	\$1,318,599
32	24			
33	25			
49	Total Performance Period:	\$63,452,474	\$59,137,853	\$4,314,621
50 51	Total Implemen	ntation & Performance Period	Total Payments (c+f)	
52			\$59,138,853	
53				

# *Example* Federal ESA

### **ESA Summary Schedule**

- Here's what the Summary Schedule looks when the Project Agreement Type is "ESA."
- Project Agreement Type field turns blue, which matches the color of the workbook tabs for Schedule 1ee (the version of Schedule 1 for the ESA ESPC financial schedules) and Schedule 1esa (the version of Schedule 1 for the ESA PPA financial schedules).
- Cell D4 provides a warning message that at least one ECM must be marked as an ESA on Schedule 2a; that message goes away when at least one ECM on Schedule 2a is designated ESA.

			SUMMARY SCHED	MATION		
			BASIC PROJECT INFOR	MATION		
Agreement Type	Project Agreement Type (choose from list)*	ESA	At least one ECM must be marked as an ESA on Schedule			
	Role	Institution	Name	Title	Email	Phone
-	Project Facilitator					
-	Customer	Department of Energy	Jane Smith	Contracting Officer	JS@doe.gov	(123) 123-1234
Project Contact Information	Contractor	ESCO ABC	Mary Worth	Project Lead	MW@ESCOABC.com	(789) 789-7892
	Finance Specialist					
	Primary Financier					
	D!		-1		Desite at Cl	
-	Projectide	nnication			List of Sites in Project (separated by	
-	Task/Purchase Order #		_		commas)	Site A, Site B, Site C
-	Contract #				List of Buildings in Project	
Project	Project Name		-		(separated by commas)	biga A, biag b, biag C, biag D, bia
Identification & Characteristics	Primary Project Location-State				Total Floor Area Affected by project (Square Feet)	4,290,916
	Primary Project Location-Zipcode				Average Annual Energy Consumption of Affected Buildings (MMBtu/yr)	268,767
_	Agency Name*	Department of Energy	_		Implementation Period (months)*	18
-	Sub Agency Name/Region Project ID #		-		Federal M&V Version	FEMP 4.0
	Financing	j Terms			Project C	Capitalization
	Applicable Financial Index	US Treasury			Total Implementation Price (from Schedule-2a Total) PLUS Financing Procurement Price-	\$31,335,774
	Performance Period (years)	21			capitalized construction period interest (\$)*	\$401,979
	Index Rate*	2.00%			other expenses (\$)*	\$0
	Added Premium (adjusted for tax incentives)*	3.00%			LESS Implementation Period Payments (from Schedule-1, (c))	\$0
Costs &	Project Interest Rate (sum of two above inputs)	5.00%			Total Amount Financed (principal)	\$31,737,753
Financials	Financing Issue Date (mm/dd/yyyy)	1/15/2024			Bonded Amount	\$5,300,694
	Project Award Date (mm/dd/yyyy)*	1/15/2024			Start date of Performance Period (mm/dd/yyyy)	7/15/2025
	Effective Through (mm/dd/yyyy)	3/15/2024				
	Primary Type of Financing (choose from list)	Loan (ESCO)			Project Find	ancial Summary
	Secondary Type of Financing (choose from list)				Annual Estimated Energy Savings (MMBtu)	
	Payment Timing*	Beginning	Biannual		Annual Estimated Water Savings (kGal)	
					Total Estimated Cost Savings	
	Guarantee % of Estimated Savings*	95.00%			Total Guaranteed Cost Savings	\$53,647,771
	Federal Contract Type				Total Payments	\$53,562,939
Other	Primary Electric Utility	Xcel Energy			<b>F</b>	
Inform - P		CONTRACTOR - LINETRIDUCTION				
Information	Primary Natural Gas Utility	Constellation - Commodity			Template E	errors/Warnings

#### **ESA Escalation Rates**

- Row 5 should include the escalation rate for the implementation period PLUS year 1 of the performance period.
- Make sure to indicate any other fuels in columns E and F; choose from the dropdown list in cells E4 and F4. These are important for correct calculations of the GHG impacts of your project.
- RECENT ePB update: the Escalation Rates enables entry for up to 40 years, so that users can try different scenarios that may not pencil out within the 25 year limit for federal ESPC projects, while enabling the amortization calculations to be accurate.

- 24	A	В	С	D	E	F	G	н	I.
1		ANNUA		RSAVIN	GS ESCALAT	ION RATES			
3									
4	Performance Period (year)	Electric Energy	Electric Demand	Natural Gas	Other Savings Type 1: Heating Oil	Other Savings Type 2: Coal	Water	O&M	Other Non- Energy Savings
5	Implementation start through first year	5.00%	3.51%	6.28%	3.51%	3.51%	6.09%	6.09%	
6	2	2.26%	1.74%	3.09%	1.74%	1.74%	3.00%	3.00%	
7	3	2.26%	1.74%	3.09%	1.74%	1.74%	3.00%	3.00%	
8	4	2.26%	1.74%	3.09%	1.74%	1.74%	3.00%	3.00%	
9	5	2.27%	1.74%	3.09%	1.74%	1.74%	3.00%	3.00%	
10	6	2.27%	1.74%	3.09%	1.74%	1.74%	3.00%	3.00%	
11	7	2.28%	1.74%	3.09%	1.74%	1.74%	3.00%	3.00%	
24	20	2.33%	1.74%	3.09%	1.74%	1.74%	3.00%	3.00%	
25	21	2.33%	1.74%	3.09%	1.74%	1.74%	3.00%	3.00%	
26	22	2.33%	1.74%	3.09%	1.74%	1.74%	3.00%	3.00%	
27	23	2.33%	1.74%	3.09%	1.74%	1.74%	3.00%	3.00%	
28	24	2.33%	1.74%	3.09%	1.74%	1.74%	3.00%	3.00%	
29	25	2.33%	1.74%	3.09%	1.74%	1.74%	3.00%	3.00%	
30	26	2.33%	1.74%	3.09%	1.74%	1.74%	3.00%	3.00%	
31	27	2.33%	1.74%	3.09%	1.74%	1.74%	3.00%	3.00%	
32	28	2.33%	1.74%	3.09%	1.74%	1.74%	3.00%	3.00%	
33	29	2.33%	1.74%	3.09%	1.74%	1.74%	3.00%	3.00%	
34	30	2.33%	1.74%	3.09%	1.74%	1.74%	3.00%	3.00%	
35	31	2.33%	1.74%	3.09%	1.74%	1.74%	3.00%	3.00%	
36	32	2.33%	1.74%	3.09%	1.74%	1.74%	3.00%	3.00%	
37	33	2.33%	1.74%	3.09%	1.74%	1.74%	3.00%	3.00%	
38	34	2.33%	1.74%	3.09%	1.74%	1.74%	3.00%	3.00%	
39	35	2.33%	1.74%	3.09%	1.74%	1.74%	3.00%	3.00%	
40	36	2.33%	1.74%	3.09%	1.74%	1.74%	3.00%	3.00%	
41	37	2.33%	1.74%	3.09%	1.74%	1.74%	3.00%	3.00%	
42	38	2.33%	1.74%	3.09%	1.74%	1.74%	3.00%	3.00%	
43	39	2.33%	1.74%	3.09%	1.74%	1.74%	3.00%	3.00%	
44	40	2.33%	1.74%	3.09%	1.74%	1.74%	3.00%	3.00%	

### **ESA Schedule 1ee: Cost Savings & Payments**

- In this example, the project involves a buydown of \$1.6 million (cell D6) but this buydown is NOT the AFFECT grant; grant funds must be entered on Schedule 2a.
- For ESA projects, Schedule 1ee includes 2 extra columns: ESA Payments (column E) and ESPC payments (column F).
- Here, the grant is for ESA ECMs (see Schedule 2a); the ESA Payments is different, while the ESPC Payments are the same.
- Note, for ESA projects, the ePB template keeps the ESA calculations and ESPC calculations separate.

	A	В	С	D	E	F
1			SCHEDULE #1(ee)	-ESA & ESPC		
2	<u> </u>		COST SAVINGS AN	ID PAYMENTS		
з						
4		(a)	(b)	(c)		
5	Implementation Period (Year 0)	Estimated Cost Savings*	Guaranteed Cost Savings	Payments"		
6		\$0	\$0	\$1,600,000		
7	Performance Period	(d)	(e)	(0 = (a) + 0)	(g)	(h)
8	(Year)	Estimated Annual Cost Savings	Guaranteed Annual Cost Savings	Total Annual Payments	ESA Payments	ESPC Payments
9	1	\$1,743,232	\$1,727,483	\$1,727,483	\$1,428,246	\$299,237
10	2	\$1,775,528	\$1,759,444	\$1,759,444	\$1,453,851	\$305,593
11	3	\$1,808,492	\$1,792,065	\$1,792,065	\$1,479,970	\$312,095
12	4	\$1,842,139	\$1,825,364	\$1,825,364	\$1,506,616	\$318,748
13	5	\$1,876,486	\$1,859,351	\$1,859,351	\$1,533,798	\$325,553
14	6	\$1,911,547	\$1,894,046	\$1,894,046	\$1,561,530	\$332,516
15	7	\$1,947,340	\$1,929,464	\$1,929,464	\$1,589,823	\$339,641
16	8	\$1,983,880	\$1,965,620	\$1,965,620	\$1,618,690	\$346,930
17	9	\$2,021,185	\$2,002,532	\$2,002,532	\$1,648,143	\$354,389
18	10	\$2,059,272	\$2,040,218	\$2,040,218	\$1,678,196	\$362,022
19	11	\$2,098,159	\$2,078,694	\$2,078,694	\$1,708,861	\$369,833
20	12	\$2,137,864	\$2,117,979	\$2,117,979	\$1,740,152	\$377,827
21	13	\$2,178,407	\$2,158,091	\$2,158,091	\$1,772,083	\$386,008
22	14	\$2,219,806	\$2,199,049	\$2,199,049	\$1,804,668	\$394,381
23	15	\$2,262,081	\$2,240,872	\$2,240,872	\$1,837,922	\$402,950
24	16	\$2,305,251	\$2,283,582	\$2,283,582	\$1,871,860	\$411,722
25	17	\$2,349,339	\$2,327,197	\$2,327,197	\$1,906,496	\$420,701
26	18	\$2,394,365	\$2,371,738	\$2,371,738	\$1,941,847	\$429,891
27	19	\$2,440,350	\$2,417,229	\$2,417,229	\$1,977,929	\$439,300
28	20	\$2,487,317	\$2,463,689	\$2,321,660	\$2,014,757	\$306,903
29	21			\$0	\$0	\$0
30	22			\$0	\$0	\$0
31	23			\$0	\$0	\$0
32	24			\$0	\$0	\$0
33	25			\$0	\$0	\$0
34	Total Performance Period:	\$41,842,040	\$41,453,708	\$41,311,679	\$34,075,439	\$7,236,240
35 36	Total Implementation	n & Performance Period	Total Guaranteed Cost Savings (b+e)	Total Payments (c+f)		
37			\$41,453,708	\$42,911,679		
38			•			

#### Without Grant

	Α	В	с	D	E	F
1			SCHEDULE #1(ee)	-ESA & ESPC		
2			COST SAVINGS AN	ID PAYMENTS		
3						
4		(a)	(Ь)	(c)		
5	Implementation Period (Year 0)	Estimated Cost Savings*	Guaranteed Cost Savings"	Pauments"		
6		\$0	\$0	\$1,600,000		
7	Performance Period	(d)	(e)	( <u>()</u> - ( <sub>0</sub> ) - ( <u>0</u> ,)	(g)	(h)
8	(Year)	Estimated Annual Cost Savings	Guaranteed Annual Cost Savings	Total Annual Payments	ESA Payments	ESPC Payments
9	1	\$1,743,232	\$1,727,483	\$1,727,483	\$1,428,246	\$299,237
10	2	\$1,775,528	\$1,759,444	\$1,759,444	\$1,453,851	\$305,593
11	3	\$1,808,492	\$1,792,065	\$1,792,065	\$1,479,970	\$312,095
12	4	\$1,842,139	\$1,825,364	\$1,825,364	\$1,506,616	\$318,748
13	5	\$1,876,486	\$1,859,351	\$1,859,351	\$1,533,798	\$325,553
14	6	\$1,911,547	\$1,894,046	\$1,894,046	\$1,561,530	\$332,516
15	7	\$1,947,340	\$1,929,464	\$1,929,464	\$1,589,823	\$339,641
16	8	\$1,983,880	\$1,965,620	\$1,965,620	\$1,618,690	\$346,930
17	9	\$2,021,185	\$2,002,532	\$2,002,532	\$1,648,143	\$354,389
18	10	\$2,059,272	\$2,040,218	\$2,040,218	\$1,678,196	\$362,022
19	11	\$2,098,159	\$2,078,694	\$2,078,694	\$1,708,861	\$369,833
20	12	\$2,137,864	\$2,117,979	\$2,117,979	\$1,740,152	\$377,827
21	13	\$2,178,407	\$2,158,091	\$2,158,091	\$1,772,083	\$386,008
22	14	\$2,219,806	\$2,199,049	\$2,199,049	\$1,804,668	\$394,381
23	15	\$2,262,081	\$2,240,872	\$2,240,872	\$1,837,922	\$402,950
24	16	\$2,305,251	\$2,283,582	\$2,283,582	\$1,871,860	\$411,722
25	17	\$2,349,339	\$2,327,197	\$2,327,197	\$1,906,496	\$420,701
26	18	\$2,394,365	\$2,371,738	\$2,371,738	\$1,941,847	\$429,891
27	19	\$2,440,350	\$2,417,229	\$2,417,229	\$1,977,929	\$439,300
28	20	\$2,487,317	\$2,463,689	\$2,321,660	\$2,014,757	\$306,903
29	21			\$0	\$0	\$0
30	22			\$0	\$0	\$0
31	23			\$0	\$0	\$0
32	24			\$0	\$0	\$0
33	25			\$0	\$0	\$0
34	Total Performance Period:	\$41,842,040	\$41,453,708	\$41,311,679	\$34,075,439	\$7,236,240
35 36	Total Implementatio	n & Performance Period	Total Guaranteed Cost Savings (b+e)	Total Payments (c+f)		-
37			\$41,453,708	\$42,911,679		

#### **ESA Schedule 1esa: Cost Savings & Payments**

- Schedule 1esa records the costs and payments for the ESA ECMs <u>only</u>; complete the yellow cells manually.
- The grey cells calculate based on what is entered for the Year 1 ESA Price, the Guarantee % and the Energy Degradation (cells B4, B5 and B6).
- In this example, the AFFECT Grant enabled larger ESA ECMs, thus shows greater total ESA Payments total (as we will see on Schedule 2a). See the next slide, if the grant is reducing the ESA \$/kWh price.

A	A	В	C	D	E
1			SCHEDULE #1(esa)-E	SA	
2	<u> </u>		ESA COSTS AND PAYM	ENTS	
з					
4	Year 1 ESA Price (\$/kWh)*	\$0.03763	Estimated FMV at end of term	\$70,000	
5	Guarantee %*	95.00%			-
6	Energy Degradation*	0.50%			
7		(a)	(Ь)	(c)	(d)
	Performance Period (Year)	Annual ESA Price (\$/k\h)	Guaranteed Annual Production (k¥h)	ESA Payment (a)"(b) (Guaranteed)	Reserve Account for Fair Market Value (FMV) Purchase
8					
9	1	\$0.03763	37,959,675	\$1,428,246	-\$75,970
10	2	\$0.03847	37,787,436	\$1,453,851	-\$75,590
11	3	\$0.03934	37,616,007	\$1,479,970	-\$75,212
12	4	\$0.04024	37,445,384	\$1,506,616	-\$74,836
13	5	\$0.04115	37,275,562	\$1,533,798	-\$74,462
14	6	\$0.04208	37,106,535	\$1,561,530	-\$74,090
15	7	\$0.04304	36,938,298	\$1,589,823	-\$73,719
16	8	\$0.04402	36,770,847	\$1,618,690	-\$73,351
17	9	\$0.04503	36,604,175	\$1,648,143	-\$72,984
18	10	\$0.04606	36,438,279	\$1,678,196	-\$72,619
19	11	\$0.04711	36,273,153	\$1,708,861	-\$72,256
20	12	\$0.04819	36,108,792	\$1,740,152	-\$71,895
21	13	\$0.04930	35,945,192	\$1,772,083	-\$71,535
22	14	\$0.05043	35,782,347	\$1,804,668	-\$71,178
23	15	\$0.05160	35,620,254	\$1,837,922	-\$70,822
24	16	\$0.05279	35,458,906	\$1,871,860	-\$70,468
25	17	\$0.05401	35,298,299	\$1,906,496	-\$70,115
26	18	\$0.05526	35,138,429	\$1,941,847	-\$69,765
27	19	\$0.05655	34,979,291	\$1,977,929	-\$69,416
28	20	\$0.05786	34,820,881	\$2,014,757	-\$69,069
29	21				
30	22				
31	23				
32	24				
33	25				
34	Total Performance Period:		727,367,742	\$34,075,439	-\$1,449,354

Without Grant

#### SCHEDULE #1(esa)-ESA ESA COSTS AND PAYMENTS 4 Year 1 ESA Price (\$/kWh) \$0.03763 Estimated FMV at end of term \$93,000 Guarantee %\* 95.00% Energy Degradation\* 0.50% (a) (b) (c) (d) Performance Period Guaranteed Annual Annual ESA ESA Payment (a)\*(b) Reserve Account for Fair Market (Year) Value (FMV) Purchase Price (\$/kWh) Production (kWh) (Guaranteed) \$0.03763 \$1,901,701 50,543,093 -\$101,569 50,290,378 \$1,934,895 -\$101,061 \$0.03847 50,038,926 \$1,968,740 -\$100,556 11 з \$0.03934 12 4 \$0.04024 49,788,731 \$2,003,250 -\$100,053 5 \$0.04115 49,539,787 \$2,038,441 -\$99,553 \$0.04208 49,292,088 \$2,074,327 -\$99,055 14 6 \$0.04304 49.045.628 \$2,110,922 -\$98,559 15 -\$98,067 \$0.04402 48,800,400 \$2,148,243 16 \$0.04503 48,556,398 \$2,186,305 -\$97,576 9 17 10 \$0.04606 48.313.616 \$2,225,124 -\$97,088 18 11 \$0.04711 48,072,048 \$2,264,717 -\$96,603 12 \$0.04819 47.831.688 \$2,305,101 -\$96,120 20 21 13 \$0.04930 47,592,529 \$2,346,292 -\$95,639 -\$95,161 22 14 \$0.05043 47,354,566 \$2,388,308 23 15 \$0.05160 47,117,794 \$2,431,169 -\$94,685 24 16 \$0.05279 46,882,205 \$2,474,891 -\$94,212 25 17 \$0.05401 46,647,794 \$2.519.494 -\$93,741 18 \$0.05526 46,414,555 \$2,564,998 -\$93,272 26 19 \$0.05655 46,182,482 -\$92,806 27 \$2,611,421 20 \$0.05786 45,951,569 \$2,658,785 -\$92,342 28 21 29 22 30 23 31 24 32 25 33 Total Performance \$45,157,125 964.256.274 -\$1,937,718 Period: 34

### **ESA Schedule 1esa (Different Example)**

- Here is example of Schedule 1esa where the grant is reducing the ESA \$/kWh price. ٠
- The two different prices are entered into cell B4 and the grant results in lower total ESA payments (cell D34). In this scenario, ٠ add a description of how the grant impacts the ESA price in the yellow "Notes" field at the bottom of Schedule 1esa.

34

	A	В	C	D	E
1			SCHEDULE #1(esa)-E	SA	
2			ESA COSTS AND PAYM	ENTS	
3					
4	Year 1 ESA Price (\$/kWh)*	\$0.03763	Estimated FMV at end of term	\$93,000	
5	Guarantee %*	95.00%			
6	Energy Degradation*	0.50%			
7		(a)	(b)	(c)	(d)
8	Performance Period (Year)	Annual ESA Price (\$/kWh)	Guaranteed Annual Production (kWh)	ESA Payment (a)*(b) (Guaranteed)	Reserve Account for Fair Market Value (FMV) Purchase
9	1	\$0.03763	37,959,675	\$1,428,423	-\$101,569
10	2	\$0.03848	37,787,436	\$1,454,031	-\$101,061
11	3	\$0.03935	37,616,007	\$1,480,153	-\$100,556
12	4	\$0.04024	37,445,384	\$1,506,802	-\$100,053
13	5	\$0.04115	37,275,562	\$1,533,988	-\$99,553
14	6	\$0.04209	37,106,535	\$1,561,723	-\$99,055
15	7	\$0.04305	36,938,298	\$1,590,020	-\$98,559
16	8	\$0.04403	36,770,847	\$1,618,890	-\$98,067
17	9	\$0.04503	36,604,175	\$1,648,347	-\$97,576
18	10	\$0.04606	36,438,279	\$1,678,403	-\$97,088
19	11	\$0.04712	36,273,153	\$1,709,072	-\$96,603
20	12	\$0.04820	36,108,792	\$1,740,367	-\$96,120
21	13	\$0.04931	35,945,192	\$1,772,302	-\$95,639
22	14	\$0.05044	35,782,347	\$1,804,891	-\$95,161
23	15	\$0.05160	35,620,254	\$1,838,150	-\$94,685
24	16	\$0.05280	35,458,906	\$1,872,091	-\$94,212
25	17	\$0.05402	35,298,299	\$1,906,732	-\$93,741
26	18	\$0.05527	35,138,429	\$1,942,088	-\$93,272
27	19	\$0.05655	34,979,291	\$1,978,174	-\$92,806
28	20	\$0.05787	34,820,881	\$2,015,006	-\$92,342
29	21				
30	22				
31	23				
32	24				
33	25				
34	Total Performance Period:		727,367,742	\$34,079,654	-\$1,937,718

#### Without Grant

#### D F SCHEDULE #1(esa)-ESA ESA COSTS AND PAYMENTS \$0.02730 4 Year 1 ESA Price (\$/kWh)\* Estimated FMV at end of term \$93,000 Guarantee %\* 95.00% 0.50% Energy Degradation (a) (Ь) (c) (d) Performance Period Annual ESA Guaranteed Annual ESA Payment (a)"(b) Reserve Account for Fair Marke (Year) Price (\$/k\h) Production (kWh) Value (FMV) Purchase (Guaranteed) \$0.02730 37,959,675 \$1,036,299 -\$101,569 1 \$1,054,877 10 2 \$0.02792 37,787,436 -\$101,061 3 \$0.02855 37,616,007 \$1,073,829 -\$100,556 11 12 4 \$0.02919 37,445,384 \$1,093,162 -\$100,053 5 \$0.02986 37,275,562 \$1,112,885 -\$99,553 13 14 6 \$0.03053 37,106,535 \$1,133,007 -\$99,055 15 7 \$0.03123 36,938,298 \$1.153.536 -\$98,559 16 8 \$0.03194 36,770,847 \$1,174,481 -\$98,067 17 9 \$0.03267 36,604,175 \$1,195,851 -\$97,576 18 10 \$0.03342 36,438,279 \$1,217,656 -\$97,088 19 11 \$0.03418 36,273,153 \$1,239,906 -\$96,603 20 12 \$0.03497 36,108,792 \$1,262,610 -\$96,120 21 13 \$0.03577 35,945,192 \$1,285,779 -\$95,639 \$0.03659 35,782,347 \$1,309,422 22 14 -\$95,161 23 15 \$0.03744 35,620,254 \$1,333,550 -\$94,685 24 16 \$0.03830 35,458,906 \$1,358,174 -\$94,212 \$0.03919 \$1.383.306 25 17 35,298,299 -\$93.741 26 18 \$0.04010 35,138,429 \$1,408,955 -\$93,272 27 19 \$0.04103 34,979,291 \$1,435,135 -\$92,806 20 28 \$0.04198 34,820,881 \$1,461,857 -\$92,342 21 29 30 22 23 31 24 32 33 25 Total Performance 727,367,742 \$24,724,277 -\$1,937,718 Period:

### **ESA Schedule 2a: Implementation Price by ECM**

- This example illustrates how the grant can enable larger ECMs and more renewable production.
- The Geothermal and Solar PV ECMs are both designated as ESA ECMs ("Yes" in column C); the template color-codes them orange.
- These ECMs will now be removed from the ESPC amortization calculation and be accounted for in the ESA calculations only.
- The grant funds are entered in column K, Applied Incentives.
   Without Grant:

Geothermal = \$37M price; \$18M incentives Solar PV = \$22M price: \$7M incentives

#### With Grant:

Geothermal = \$48M price; \$24M incentives Solar PV = \$31M price: \$11M incentives

	A	В	с	D	E	F	G	н	l I	J	К	L
				IMPLEMENTATION PRI	SCHEDU CE BY ENE	JLE #2a RGY CON	ISERVATION	MEASURE				
	2 IMPLEMENTATION PRICE BY ENERGY CONSERVATION MEASURE 4 5 6 ECM - Technology Category* ECM No. Rearry 6 ECM No. Rearry 6 ECM Description - Title* ECM Size CM Coverage 1 CM Description - Title* ECM Size CM 1											
	6 FCM - Technology Category*	ECM No.	Energy Sales Agreement (ESA)?	ECM Description – Title*	ECM Size	ECM Coverage (%)	Location/Facil ity ID	M&V Expense (\$)	Cost of Goods and Services (Base Construction)"	Project Implementation Delivery Charge*	Applied Incentives (\$)	Implementation Price PDP + [a+b] - c
	8		Proje	ect Development Price (PDP)-Teo	chnical Energ	y Audit and P	roject Proposal					\$228,416
	Building Automation System (BAS) / Energy Management 9 Control Systems (EMCS)	3	No	BAS Optimization			Campus	\$708	\$578,770	\$216,717	\$0	\$795,487
Without	Conditioning (HVAC)	4A	No	Replace Leaking VAV Couplings in B95			B95	\$147	\$120,000	\$44,933	\$0	\$164,933
Grant	Heating, Ventilating, and Air 11 Conditioning (HVAC)	4B	No	Laboratory Air Change Optimization			B25, B95	\$151	\$123,219	\$46,139	\$0	\$169,357
	12 Electric Motors and Drives	8A	No	EC Motors and VFDs	415 HP		Campus	\$254	\$207,500	\$77,697	\$0	\$285,197
	13 Electric Motors and Drives	8B	No	Notched Fan Belts	56 belts		Campus	\$14	\$11,200	\$4,194	\$0	\$15,394
	Geothermal	11A	Yes	Geothermal	51.8 MMBtu/hr		Campus	\$0	\$27,210,000	\$10,188,619	\$18,190,000	\$19,208,619
	15 Solar PV	118	Yes	Solar PV	9.4 MW		Campus	\$0	\$16,805,000	\$5,676,146	\$7,240,000	\$15,241,146
	Energy/Utility Distribution 16 Systems	12	No	High Efficiency Transformers	26,400 kW		Campus	\$3,273	\$2,676,780	\$1,002,304	\$0	\$3,679,084
	257											
	258											
	259	Т	OTALS:					\$4,545	\$3,717,469	\$1,391,984	\$0	\$5,337,869
	A	В	с	D	E	F	G	н	I	L	К	L
				IMPLEMENTATION PRI	CE BY ENE	RGY CON	ISERVATION	MEASURE				<u>.</u>
	4		Energy						(a)	(Ь)	(c)	(d)
	6 ECM - Technology Category*	ECM No.	Sales Agreement (ESA)?	ECM Description - Title"	ECM Size	ECM Coverage (%)	Location/Facil ity ID	M&V Expense (\$)	Cost of Goods and Services (Base Construction)"	Project Implementation Delivery Charge*	Applied Incentives (\$)	Implementation Price PDP + [a+b] - c
	8		Proje	ect Development Price (PDP)-Teo	chnical Energ	y Audit and P	roject Proposal					\$228,416
	Building Automation System (BAS) / Energy Management 9 Control Systems (EMCS)	3	No	BAS Optimization			Campus	\$708	\$578,770	\$216,717	\$0	\$795,487
Grant	Heating, Ventilating, and Air Conditioning (HVAC) 10 Improvements	4A	No	Replace Leaking VAV Couplings in 895			B95	\$147	\$120,000	\$44,933	\$0	\$164,933
Grant	Conditioning (HVAC)	4B	No	Laboratory Air Change Optimization			B25, B95	\$151	\$123,219	\$46,139	\$0	\$169,357
	12 Electric Motors and Drives	8A	No	EC Motors and VFDs	415 HP		Campus	\$254	\$207,500	\$77,697	\$0	\$285,197
	13 Electric Motors and Drives	8B	No	Notched Fan Belts	56 belts		Campus	\$14	\$11,200	\$4,194	\$0	\$15,394
	Geothermal	11A	Yes	Geothermal	67.9 MMBtu/hr	90.00%	Campus	\$0	\$35,438,458	\$13,269,715	\$24,190,000	\$24,518,174
	15 Solar PV	11B	Yes	Solar PV	13.9 MW	99.00%	Campus	\$0	\$23,447,025	\$7,629,115	\$11,240,000	\$19,836,140
	Energy/Utility Distribution 16 <u>Systems</u>	12	No	High Efficiency Transformers	26,400 kW		Campus	\$3,273	\$2,676,780	\$1,002,304	\$0	\$3,679,084
	257											
	258											
	259	T	otals:					\$4,545	\$3,717,469	\$1,391,984	\$0	\$5,337,869

#### **ESA Schedule 3: Performance Period Cash Flow**

- Schedule 3 only pertains to the ESPC ECMs.
- In this example, the grant is applied to the ESA ECMs; thus, the ESPC calculations are not affected, and Schedule 3 will look the same, with or without the grant.
- The Annual Cash Flow, will match the ESPC annual payments in Schedule 1ee and adds the ESPC buydown under column C.

	A	В	с	D	E	F	v	w	х	Y	z	AA	AB	AC
1														
2														<u> </u>
3														
4		Term (year)	Implementation Period (Year 0)	1	2	3	19	20	21	22	23	24	25	Totals
5		Principal Repayment		\$88,075	\$92,396	\$96,969	\$379,639	\$258,231	\$0	\$0	\$0	\$0	\$0	\$4,139,846
6	Debt	Performance Period Incentives and Other Revenues		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
7	Service/Performance Period Payments	Dollar savings retained by customer		\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1	
8		Interest (\$)		\$191,637	\$187,267	\$182,680	\$12,214	\$0	\$0	\$0	\$0	\$0	\$0	\$2,327,896
9		Total Debt Service (a)		\$279,712	\$279,663	\$279,649	\$391,853	\$258,231	\$0	\$0	\$0	\$0	\$0	\$6,467,742
10														
11		Management/Administration		\$5,269	\$5,408	\$5,551	\$8,436	\$8,660	\$0	\$0	\$0	\$0	\$0	\$136,633
12		Operation		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
13		Maintenance		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
14		Repair and Replacement		\$0	\$0	\$1,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$12,000
15		Measurement and		\$10,700	\$15,800	\$19,985	\$30,370	\$31,175	\$0	\$0	\$0	\$0	\$0	\$479,943
16		Other PP Expense 1: Other												\$0
17	Performance Period	Other PP Expense 2: Other												\$0
18	Expenses	SUBTOTAL Before Application of Performance Period Delivery Percentage		\$15,969	\$21,208	\$26,537	\$38,807	\$39,835	\$0	\$0	\$0	\$0	\$0	\$628,576
19		Performance Period Delivery Percentage (%)		22.26%	22.26%	22.26%	22.26%	22.26%	22.26%	22.26%	0.00%	0.00%	0.00%	
20		Performance Period Delivery Charge (4)		\$3,555.00	\$4,721.00	\$5,908.00	\$8,639.00	\$8,868.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$139,933
21		TOTAL Performance Period Price /bi		\$19,524	\$25,929	\$32,445	\$47,446	\$48,703	\$0	\$0	\$0	\$0	\$0	\$768,510
22	ESA Payments		\$1,600,000	\$1,428,246	\$1,453,851	\$1,479,970	\$1,977,929	\$2,014,757	\$0	\$0	\$0	\$0	\$0	\$34,075,439
23	Annual Cash Flow (Performance Period)	TOTAL – ANNUAL PAYMENTS (aj+(b)	\$1,600,000	\$199,236	\$305,592	\$312,094	\$439,299	\$306,934	\$0	\$0	\$0	\$0	\$0	\$8,836,252

### **ESA Schedule 4: Estimated Savings by ECM**

- In this example, the ESA ECMs show different estimated annual cost and energy savings (columns Y, Z and AE).
- However, the Simple Payback calculations (column AG) include only the ESPC ECMs, not the ESA ECMs, so Simply Payback is the same for both versions (other examples, this could be different).



### ESA Schedule 4g: Estimated GHG Savings by ECM

• In this example, Scope 1 and Scope 2 estimated emission reductions are greater with the grant, which enabled larger ESA ECMs.

		А	В	C	D	E	F	G	н	1	J	K	L	М	N	0	Р	Q	R	S	т
	1						S	CHEDULE #	4g												
	2					GHG EMI	SIONS BY E	NERGY CO	NSERVATIC	ON MEASUR	E										1.1.1
	3																				
																	t =	l			
			ECM		b1			d1			ela			elb			+d]+e]g+e]	h			
	4		1								0			011			h				
				eGrid State	Electric	ka		Natural aas	ka	Natural aas	Other Savings Type	ka	Other Savings	Savinas	ka	Other Savings	Total energy	Water	Annual Scope 1	Annual Scope 2 A	nnual Total CO2e
lithout		FCM Number	Short Description	Region (Add a	energy	CO2e/Mmbtu	Electric GHG	savings	CO2e/MMBtu	GHG	1: Heating	CO2e/MMBtu	Type 1:	Type 2:	CO2e/MMBtu	Type 2: Coal	savings	savings	CO2e	CO2e	Reductions
nulout	5	LCM Nomber	Short Description	showing the	suvings						Oil		nealing Oil	Coal					Reductions	Reductions	
Cront	6			regions)	(kWh/yr)		kg CO2e	(MMBtu/yr)		kg CO2e	(MMBtu/yr)		kg CO2e	(MMBtu/yr)		kg CO2e	(MMBtu/yr)	(Kgal/yr)	kg CO2e	kg CO2e	kg CO2e
Jiani			Project Development Price (PDP)-Technical Energy				I														
	7		Audit and Project Proposal																		
		2	RAS Optimization	WECC Realize	0	152	0	402	52	01.405	2 100	162	499.004		104	0	2 602	0	500 701		500 701
	8	0	bas optimization	WEECE ROCKIES	v	135	Ŭ	400	35	21,400	0,170	100	400,270	v	104	Ŭ	0,370	v	307,701	Ŭ	307,701
	9	4A	Replace Leaking VAV Couplings in B95	WECC Rockies	0	153	0	7,431	53	394,717	0	153	0	0	104	0	7,431	0	394,717	0	394,717
	10	4B	Laboratory Air Change Optimization	WECC Rockies	0	153	0	5,937	53	315,343	974	153	149,091	0	104	0	6,911	0	464,434	0	464,434
	11	8A	EC Motors and VFDs	WECC Rockies	502,953	153	262,681	0	53	0	0	153	0	0	104	0	1,716	0	0	262,681	262,681
	12	8B	Notched Fan Belts	WECC Rockies	0	153	0	0	53	0	576	153	88,169	0	104	0	576	0	88,169	0	88,169
	13	11A	Geothermal	WECC Rockies	-210,594	153	-109,989	75,286	53	3,998,801	0	153	0	23,060	104	2,408,428	97,627	0	6,407,229	(109,989)	6,297,240
	14	11B	Solar PV	WECC Rockies	14,502,953	153	7,574,570	0	53	0	0	153	0	0	104	0	49,484	0	0	7,574,570	7,574,570
	15	12	High Efficiency Transformers	WECC Rockies	0	153	0	0	53	0	0	153	0	0	104	0	-	0	0	0	0
	256			Select Region	0	110	0	0	53	0	0	74	0	0	104	0	-	0	0	0	0
	257			Select Region	0	110	0	0	53	0	0	74	0	0	104	0	-	0	U	0	0
	258		TOTALS:		502,953		7,727,263	13,771		4,730,265	4,740		725,556	0		2,408,428	20,227		7,864,249	7,727,263	15,591,512
	З																				
			ECM								_1_			_1L			0.003412	1 . '	1 !	1	
	4		LCH					"			e la			e in			b1+d1+e1a	1 "	1 !	1	
				- C-:	<b>FL</b>						Uther		Other	Other	•	Other	T		Annual	Annual	A
				Region (Add	Electric	кд CO2e/Mmb	Electric	Natural gas	Kg CO2e/MMB	Natural gas	Type 1:	CO2e/MMB	Savings	Savings	Kg CO2e/MMB	Savings	energy	Water	Scope 1	Scope 2	CO2e
	-	ECM Numbe	r Short Description	a drop down	savings	u	GHG	savings	u	GHG	Heating	tu	Iype 1:   Hesting Oil	Lype 2:	tu	lype 2:	savings	savings	CU2e Reductions	CU2e Reductions	Reductions
\A/i+b	5	-		showing the						1 000	Cil (MMBru/ar		Treating On	(MMBru/a		Coal	(MMBru/ar		neudotions	neddoddins	
VVILII	6			regions)	(k₩h/yr)		kg LUZe	(MMBturyr)		kg LUZe	1		kg LUZe	L n		kglUZe		[Kgallyr]	kgluze	kg LUZe	kgLUZe
Cront			Decises Development Drive (DDD)-Technical Energy																		
Grant			Froject Development Fride (FDF)-rechnicar Lifergy	,																	
	7		Audit and Project Proposal	,		- <u>_</u>			1	1	1		-	1	-	1	1				1
	7	3	Audit and Project Proposal BAS Optimization		0	153		403	53	21.405	3 190	153	488 296		104	0	3 593	0	509 701	0	509 701
	8	3	Audit and Project Proposal BAS Optimization	V WECC Rockies	0	153	0	403	53	21,405	3,190	153	488,296	0	104	0	3,593	0	509,701	o	509,701
	7 8 9	3 4A	Audit and Project Development Procession BAS Optimization Replace Leaking VAV Couplings in B95	WECC Rockies	0	153	0	403 7,431	53	21,405	3,190	153 153	488,296	0	104 104	0	3,593	0	509,701 394,717	0	509,701
	7 8 9 10	3 4A 4B	Audit and Project Development Procession BAS Optimization Replace Leaking VAV Couplings in B95 Laboratory Air Change Optimization	WECC Rockies		153 153 153	0 0 0	403 7,431 5,937	53 53 53	21,405 394,717 315,343	3,190 0 974	153 153 153	488,296 0 149,091	0	104 <u>104</u> 104	0	3,593 7,431 6,911	0	509,701 394,717 464,434	0 0 0	509,701 394,717 464,434
	7 8 9 10 11	3 4A 4B 8A	Audit and Project Development Protect Port Performance Lengs Audit and Project Proposal BAS Optimization Replace Leaking VAV Couplings in B95 Laboratory Air Change Optimization EC Motors and VFDs	V WECC Rockies WECC Rockies WECC Rockies WECC Rockies	0 0 0 502,953	153 153 153 153 153	0 0 0 262,681	403 7,431 5,937 0	53 53 53 53 53	21,405 394,717 315,343 0	3,190 0 974 0	153 153 153 153	488,296 0 149,091 0	0	104 104 104 104	0 0 0 0	3,593 7,431 6,911 1,716	0 0 0	509,701 394,717 464,434 0	0 0 262,681	509,701 394,717 464,434 262,681
	7 8 9 10 11 12	3 4A 4B 8A 8B	Audit and Project Proposal BAS Optimization Replace Leaking VAV Couplings in B95 Laboratory Air Change Optimization EC Motors and VFDs Notched Fan Belts	WECC Rockies WECC Rockies WECC Rockies WECC Rockies WECC Rockies	0 0 0 502,953 0	153 153 153 153 153 153	0 0 262,681 0	403 7,431 5,937 0 0	53 53 53 53 53 53	21,405 394,717 315,343 0 0	3,190 0 974 0 576	153 153 153 153 153 153	488,296 0 149,091 0 88,169	0 0 0 0	104 104 104 104 104 104	0 0 0 0 0	3,593 7,431 6,911 1,716 576	0 0 0 0	509,701 394,717 464,434 0 88,169	0 0 262,681 0	509,701 394,717 464,434 262,681 88,169
	7 8 9 10 11 12 13	3 4A 4B 8A 8B 11A	Audit and Project Proposal BAS Optimization Replace Leaking VAV Couplings in B95 Laboratory Air Change Optimization EC Motors and VFDs Notched Fan Belts Geothermal	V WECC Rookies WECC Rookies WECC Rookies WECC Rookies WECC Rookies	0 0 502,953 0 -350,594	153 153 153 153 153 153 153	0 0 262,681 0 -183,107	403 7,431 5,937 0 0 101,286	53 53 53 53 53 53 53 53	21,405 394,717 315,343 0 0 5,379,786	3,190 0 974 0 576 0	153 153 153 153 153 153 153	488,296 0 149,091 0 88,169 0	0 0 0 0 0 23,060	104 104 104 104 104 104 104	0 0 0 0 0 0 2,408,428	3,593 7,431 6,911 1,716 576 123,150		509,701 334,717 464,434 0 88,169 7,788,214	0 0 262,681 0 (183,107)	509,701 394,717 464,434 262,681 88,169 7,605,106
	7 8 9 10 11 12 13 14	3 4A 4B 8A 8B 11A 11B	Audit and Project Proposal Audit and Project Proposal BAS Optimization Replace Leaking VAV Couplings in B95 Laboratory Air Change Optimization EC Motors and VFDs Notched Fan Belts Geothermal Solar PV	WECC Rookies WECC Rookies WECC Rookies WECC Rookies WECC Rookies WECC Rookies	0 0 0 502,953 0 -350,594 21,502,953	153 153 153 153 153 153 153 153 153	0 0 262,681 0 -183,107 11,230,515	403 7,431 5,937 0 0 101,286 0	53 53 53 53 53 53 53 53 53	21,405 394,717 315,343 0 0 5,379,786 0	3,190 0 974 0 576 0 0	153 153 153 153 153 153 153 153	488,236 0 149,031 0 88,163 0 0	0 0 0 0 23,060	104 104 104 104 104 104 104 104	0 0 0 0 2,408,428 0	3,593 7,431 6,911 1,716 576 123,150 73,368	0 0 0 0 0 0	509,701 334,717 464,434 0 88,169 7,788,214 0	0 0 262,681 0 (183,107) 11,230,515	509,701 394,717 464,434 262,681 88,169 7,605,106 11,230,515
	7 8 9 10 11 12 13 14 15	3 4A 4B 8A 8B 11A 11B 12	Audit and Project Proposal BAS Optimization BAS Optimization Explace Leaking VAV Couplings in B95 Laboratory Air Change Optimization EC Motors and VFDs Notched Fan Bets Geothermal Solar PV High Efficiency Transformers	VECC Rookies VECC Rookies VECC Rookies VECC Rookies VECC Rookies VECC Rookies VECC Rookies	0 0 502,953 0 -350,594 21,502,953 0	153 153 153 153 153 153 153 153 153 153	0 0 262,681 0 -183,107 11,230,515 0	403 7,431 5,337 0 0 101,286 0 0	53 53 53 53 53 53 53 53 53 53 53	21,405 394,717 315,343 0 0 5,379,786 0 0	3,190 974 0 576 0 0 0	153 153 153 153 153 153 153 153 153	488,236 0 143,031 0 88,169 0 0 0	0 0 0 23,060 0	104 104 104 104 104 104 104 104	0 0 0 0 2,408,428 0 0	3,593 7,431 6,911 1,716 576 123,150 73,368 -		509,701 394,717 464,434 0 88,169 7,788,214 0 0	0 0 262,681 0 (183,107) 11,230,515 0	509,701 394,717 464,434 262,681 86,169 7,605,106 11,230,515 0
	7 8 9 10 11 12 13 14 15 25(	3 4A 4B 8A 8B 11A 11B 12 6	Audit and Project Proposal BAS Optimization Replace Leaking VAV Couplings in B95 Laboratory Air Change Optimization EC Motors and VFDs Notched Fan Belts Geothermal Solar PV High Efficiency Transformers	VECC Rookies WECC Rookies WECC Rookies WECC Rookies WECC Rookies WECC Rookies WECC Rookies Select Region	0 0 502,953 0 -350,594 21,502,953 0 0 0	153 153 153 153 153 153 153 153 153 153	0 0 262,681 -183,107 -183,107 1,20,515 0 0	403 7,431 5,337 0 101,286 0 0 0	53 53 53 53 53 53 53 53 53 53 53	21,405 394,717 315,343 0 5,379,786 0 0 0	3,190 0 974 0 576 0 0 0 0 0	153 153 153 153 153 153 153 153 153 153	488,236 0 149,031 0 88,169 0 0 0 0	0 0 0 23,060 0 0 0	104 104 104 104 104 104 104 104 104 104	0 0 0 2,408,428 0 0 0 0	3,593 7,431 6,911 1,716 576 123,150 73,368 		509,701 394,717 464,434 0 88,169 7,788,214 0 0 0	0 0 262,681 0 (183,107) 11,230,515 0 0	509,701 394,717 464,434 262,681 88,169 7,605,106 11,230,515 0 0
	7 8 9 10 11 12 13 14 15 256 256	3 4A 4B 8A 8B 11A 11B 12 8 7	Audit and Project Proposal BAS Optimization Replace Leaking VAV Couplings in B95 Laboratory Air Change Optimization EC Motors and VFDs Notched Fan Belts Geothermal Solar PV High Efficiency Transformers TIDIAL S:	VECC Rookies WECC Rookies WECC Rookies WECC Rookies WECC Rookies WECC Rookies WECC Rookies WECC Rookies Select Region	0 0 502,953 0 -350,594 21,502,953 0 0 0 0	153 153 153 153 153 153 153 153 153 153	0 0 262,681 0 -183,107 11,230,515 0 0 0 11,230,089	403 7,431 5,337 0 101,286 0 0 0 0 0 10,287	53 53 53 53 53 53 53 53 53 53 53 53 53	21,405 334,717 315,343 0 5,379,786 0 0 0 0 0 0 0 0	3,190 0 974 0 576 0 0 0 0 0 0 0 0 0	153 153 153 153 153 153 153 153 153 74 74	488,296 0 149,091 0 88,169 0 0 0 0 0 72E EEE	0 0 0 23,060 0 0 0 0 0	104 104 104 104 104 104 104 104 104 104	0 0 0 2,408,428 0 0 0 0 0 0 0 0 0 0	3,593 7,431 6,911 1,716 576 123,150 - - - - - - - - - - - - - - - - - - -		503,701 334,717 464,434 0 88,169 7,788,214 0 0 0 0 0 9 245 224	0 0 262,681 0 (183,107) 11,230,515 0 0 0 1 1,210,082	509,701 394,717 464,434 262,681 88,163 7,605,106 11,230,515 11,230,515 0 0 0

W

# *Example* Direct-Funded

### **Direct-Funded Summary Schedule**

- When the Project Agreement Type is "Directfunded," financing-related fields are greyed out, e.g., "Finance Specialist" (row 10), "Index Rate" (row 28) and "Added Premium" (row 29).
- For direct-funded projects, complete as many fields as possible.
- Red text cells:
  - Complete the following fields that are in red text: Agency Name (cell C20), Implementation Period (cell G20), Project Award Date (cell C32).
  - Leave the following red text fields blank: Payment Timing (cells C36 and D36), Guarantee % of Estimated Savings (cell C38).
  - Enter \$0 in Financing Procurement Price cells G27 and G28.
- Note: An error message may display in the lower right-hand corner until you complete required information in other tabs.

			SUMMARY SCHE BASIC PROJECT INFO	DULE RMATION		
Agreemen	Project Agreement Type (choose from list)	Direct-funded				
;	Role	Institution	Name	Title	Email	Phone
,	Project Facilitator	NA				
3	Customer	Provided	Provided	Provided	Provided	
Project Co Informa	tion Contractor	Provided				
0	Finance Specialist					
1	Primary Financier	N/A				
2			_			
3	Project lo	lentification			Project	Characteristics
4	Task/Purchase Order #				commas)	Site A
5	Contract #		-		Number of Buildings in Project List of Buildings in Project (separated	1
6	Project Name				by commas)	Building A
7 Projec	Primary Project Location-City		-		Market Segment Total Floor Area Affected by project	
8 Identificat	tion & Primary Project Location-State		_		(Square Feet)	8,000
Character	ristics Primary Project Location-Zipcode				Average Annual Energy Consumption of Affected Buildings (MMBtulyr)	
	Agency Name"	Provided			Implementation Period (months)*	12
1	Sub Agency Name/Region	Provided			Federal M&V Version	
2	Project ID #					
3						
5	Financ	ing Terms			Projec	t Capitalization
6	Applicable Financial Index				Total Implementation Price (from School ulor 2 - Total)	\$1,561,750
7	Performance Period (years)				PLUS Financing Procurement Price-capitalized construction period interest (\$)	\$0
	Index Rate"				PLUS Financing Procurement	\$0
9	Added Premium (adjusted for tax incentives)"	_			LESS Implementation Period Payments (from Schedule-1, (c))	\$1,561,750
0 Costs	Project Interest Rate (sum of two above) (and inputs)	e 0.00%			Total Amount Financed (principal)	\$0
1	Financing Issue Date (mm/dd/yyyy)				Bonded Amount	
2	Project Award Date (mm/dd/yyyy)*	6/15/2024			Start date of Performance Period (mm/dd/yyyy)	6/15/2025
3	Effective Through (mm/dd/yyyy) Brimany Type of Financing (chaese		_			
4	from list)	Appropriation/Cash	_		Project F	inancial Summary
5	Secondary Type of Financing (choos from list)	e			Annual Estimated Energy Savings (MMBtu)	333
5	Payment Timing"	Beginning			Annual Estimated Water Savings	500
7					Total Estimated Cost Savings	\$2,218,759
	Guarantee % of Estimated				Total Guaranteed Cost Savings	\$2,218,759
9	Federal Contract Type				Total Payments	\$1,561,750
0 Othe	r Primary Electric Utility	Provided	_		-	
-	fion Drimon Natural Goal bility	None			Template	e Errors/Warnings
Informa	Filmary Ivacurar Gas Oulity					-

#### **Direct-Funded Escalation Rates**

- Complete the Escalation Rates if appropriate for your direct-funded project.
- Escalation rates will influence the calculated annual savings on Schedule 1.

	A	В	С	D	E	F	G	Н	I I
1		ANNUA		R SAVIN	GS ESCALAT	ION RATES			
2									
4	Performance Period (year)	Electric Energy	Electric Demand	Natural Gas	Other Savings Type 1: Heating Oil	Other Savings Type 2: Other	Water	O&M	Other Non- Energy Savings
5	Implementation start through first year	3.20%	3.20%	3.20%	3.20%			3.20%	
6	2	1.74%	1.74%	1.74%	1.74%			1.74%	
7	3	1.74%	1.74%	1.74%	1.74%			1.74%	
8	4	1.74%	1.74%	1.74%	1.74%			1.74%	
9	5	1.74%	1.74%	1.74%	1.74%			1.74%	
10	6	1.74%	1.74%	1.74%	1.74%			1.74%	
11	7	1.74%	1.74%	1.74%	1.74%			1.74%	
12	8	1.74%	1.74%	1.74%	1.74%			1.74%	
13	9	1.74%	1.74%	1.74%	1.74%			1.74%	
14	10	1.74%	1.74%	1.74%	1.74%			1.74%	
15	11	1.74%	1.74%	1.74%	1.74%			1.74%	
16	12	1.74%	1.74%	1.74%	1.74%			1.74%	
17	13	1.74%	1.74%	1.74%	1.74%			1.74%	
18	14	1.74%	1.74%	1.74%	1.74%			1.74%	
19	15	1.74%	1.74%	1.74%	1.74%			1.74%	
20	16	1.74%	1.74%	1.74%	1.74%			1.74%	
21	17	1.74%	1.74%	1.74%	1.74%			1.74%	
22	18	1.74%	1.74%	1.74%	1.74%			1.74%	
23	19	1.74%	1.74%	1.74%	1.74%			1.74%	
24	20	1.74%	1.74%	1.74%	1.74%			1.74%	
25	21	1.74%	1.74%	1.74%	1.74%			1.74%	
26	22	1.74%	1.74%	1.74%	1.74%			1.74%	
27	23	1.74%	1.74%	1.74%	1.74%			1.74%	
28	24	1.74%	1.74%	1.74%	1.74%			1.74%	
29	25	1.74%	1.74%	1.74%	1.74%			1.74%	
30									

#### **Direct-Funded Schedule 1: Cost Savings & Payments**

- Because the entire project price is being bought down by cash, enter the exact total project implementation price in cell D6 for Year 0 payments.
- Schedule 1 calculates an annual estimated cost savings (and it uses identical numbers for the guaranteed savings and dollar savings retained columns).
- This example will show more ECMs and more GHG savings, with costs offset by the grant.

		W	/ithout Grant		
	A	В	С	D	E
1			SCHEDULE #1		
2		COST	SAVINGS AND PAYM	ENTS	1 I I I I I I I I I I I I I I I I I I I
-				2.1110	
4		(a)	மு	(c)	1
5	Implementation Period (Year M	Estimated Cost Savings"	Guaranteed Cost Savings	Payments"	
-				\$1,561,750	
7		(d)	(e)	(f)	(g)
	Performance Period (Year)	Estimated Annual Cost Savings	Guaranteed Annual Cost Savings	Annual Payments	Annual Dollar Savings Retained
8		*05 000	+9E 900	ΔΦ.	ACT OND
9	2	\$03,300 \$86,246	\$00,000 \$86,246	04 (12	\$05,300 \$86,246
10		\$00,240 \$86,599	♦00,240 \$26,599	¢۵ (	\$00,240 \$26,599
11		+00,333 +00,957	+00,000 +00 9E7	04 0	*00,000 *00 9E7
12	4	\$00,331	\$00,331 \$87,322	04 0	\$90,331
15	6	\$87,693	\$87,693	0 \$0	\$87,693
14	7	\$88.070	\$88.070	0 \$0	\$88.070
10	8	\$88.454	\$88,454	\$0	\$88,454
17	9	\$88,845	\$88,845	\$0	\$88,845
12	10	\$89,242	\$89,242	\$0 \$0	\$89,242
19	11	\$89.647	\$89.647	\$0 \$0	\$83.647
20	12	\$90.058	\$90.058	\$0	\$90.058
21	13	\$90,477	\$90.477	\$0	\$90.477
22	14	\$90,903	\$90,903	\$0	\$90,903
23	15	\$91,336	\$91,336	\$0	\$91,336
24	16	\$91,777	\$91,777	\$0	\$91,777
25	17	\$92,225	\$92,225	\$0	\$92,225
26	18	\$92,682	\$92,682	\$0	\$92,682
27	19	\$93,146	\$93,146	\$0	\$93,146
28	20	\$93,618	\$93,618	\$0	\$93,618
29	21	\$94,099	\$94,099	\$0	\$94,099
30	22	\$94,588	\$94,588	\$0	\$94,588
31	23	\$95,085	\$95,085	\$0	\$95,085
32	24	\$95,591	\$95,591	\$0	\$95,591
33	25	\$96,106	\$96,106	\$0	\$96,106
34	Total Performance Period:	\$2,266,664	\$2,266,666	\$0	\$2,266,666
35 36	Total Implementatio	n & Performance Period	Total Guaranteed Cost Savings (b+e)	Total Payments (c+f)	
77			\$7.766.666	\$1561750	

#### With Grant (Slightly higher cash price with more ECMs)

	A	В	С	D	E
1			SCHEDULE #1		
2	<u> </u>	COS	T SAVINGS AND PA	YMENTS	<u>_</u>
з					_
4		(a)	(Ь)	(c)	
5	Implementation Period (Year 0)	Estimated Cost Savings"	Guaranteed Cost Savings"	Payments <sup>*</sup>	
6				\$1,626,750	
7	Performance Period	(d)	(e)	(f)	(g)
8	(Year)	Estimated Annual Cost Savings	Guaranteed Annual Cost Savings	Annual Payments	Annual Dollar Savings Retained by Customer
9	1	\$105,800	\$105,800	\$0	\$105,800
10	2	\$106,353	\$106,353	\$0	\$106,353
11	3	\$106,916	\$106,916	\$0	\$106,916
12	4	\$107,489	\$107,489	\$0	\$107,489
13	5	\$108,072	\$108,072	\$0	\$108,072
14	6	\$108,665	\$108,665	\$0	\$108,665
15	7	\$109,268	\$109,268	\$0	\$109,268
16	8	\$109,881	\$109,881	\$0	\$109,881
17	9	\$110,506	\$110,506	\$0	\$110,506
18	10	\$111,141	\$111,141	\$0	\$111,141
19	11	\$111,787	\$111,787	\$0	\$111,787
20	12	\$112,445	\$112,445	\$0	\$112,445
21	13	\$113,114	\$113,114	\$0	\$113,114
22	14	\$113,794	\$113,794	\$0	\$113,794
23	15	\$114,487	\$114,487	\$0	\$114,487
24	16	\$115,191	\$115,191	\$0	\$115,191
25	17	\$115,908	\$115,908	\$0	\$115,908
26	18	\$116,637	\$116,637	\$0	\$116,637
27	19	\$117,379	\$117,379	\$0	\$117,379
28	20	\$118,134	\$118,134	\$0	\$118,134
29	21	\$118,902	\$118,902	\$0	\$118,902
30	22	\$119,683	\$119,683	\$0	\$119,683
31	23	\$120,478	\$120,478	\$0	\$120,478
32	24	\$121,286	\$121,286	\$0	\$121,286
33	25	\$122,109	\$122,109	\$0	\$122,109
34	Total Performance Period:	\$2,835,423	\$2,835,425	\$0	\$2,835,425
35 36	Total Implementat Pa	ion & Performance	Total Guaranteed Cost Savings (b+e)	Total Payments (c+f)	
37			\$2,835,425	\$1,626,750	

### **Direct-Funded Schedule 2a: Implementation Price by ECM**

#### Without Grant

- In this example, two additional ECMs have been ADDED to the non-grant version, and the grant amounts are entered under the Applied Incentives.
- The added ECMs increase the project price significantly, but the grants help offset them, enabling a much more decarbonized project.
- Schedule 3 does not apply to directfunded projects.

	A	В	С	D	E	F	G	н	L. L.	J	к	L
1					SCHED	JLE #2a						
2	<u> </u>			IMPLEMENTATION PRI	<u>CE BY ENE</u>	RGY CON	SERVATION I	MEASURE				<u> </u>
4			l			ECM			(a)	(b)	(c)	(d)
6 7	ECM - Technology Category*	ECM No.	Not Applicable	ECM Description – Title*	ECM Size	Coverage (%)	Location/Facilit y ID	M&V Expense (\$)	Cost of Goods and Services (Base Construction)*	Project Implementation Delivery Charge*	Applied Incentives (\$)	Implementation Price PDP + [a+b] - c
8			Pro	oject Development Price (PDP)-Te	chnical Energy	/ Audit and Pro	ject Proposal					\$20,000
9	Advanced Metering Systems	1		Advanced electrical meters			Provided		\$1,800	\$750		\$2,550
10	Heating, Ventilating, and Air Conditioning	2	2	Upgrade: High efficiency Central HVAC	22 Tons		Provided		\$50,000	\$9,500	\$3,000	\$56,500
11	Lighting Improvements	з	a.	Upgrade: high efficiency (LED) lighting			Provided		\$20,000	\$5,000	\$2,000	\$23,000
12	Future/Other ECMs	4		Major Building Renovation - structure, system, envelope			Provided		\$1,100,000	\$300,000		\$1,400,000
13	Building Automation Systems/Energy Management	5	5	Energy Management System			Provided		\$28,000	\$10,000		\$38,000
258												
259			TOTALS:					<b>\$</b> 0	\$1,199,800	\$325,250	\$5,000	\$1,540,050

#### With Grant Grant amounts entered here! SCHEDULE #2a IMPLEMENTATION PRICE BY ENERGY CONSERVATION MEASURE (a) (b) (c) (d) ECM Not ocation/Facilit M&V Expense ECM - Technology Category\* ECM No. ECM Description - Title\* ECM Size Coverage Cost of Goods and Applicable y ID (\$) Applied nplementation Price (%) Services (Base . PDP + [a+b] - c Incentives (S) Project Development Price (PDP)-Technical Energy Audit and Project Proposal \$20,000 dvanced Metering Systems dvanced electrical meter Provided \$1,800 \$2,550 eating, Ventilating, and Air pgrade: High efficiency 22 Tons \$50,000 \$9,50 Provided \$3,000 \$56,500 entral HVAC 10 parade: high efficiency (LED) \$20,000 \$5,000 Provided \$2,000 \$23,000 ghting Improvements \$1,100,000 \$300,000 Provided \$1,400,000 uture/Other ECMs tructure, system, envelope ling Automation Provided \$28,000 \$10,000 \$38,000 nergy Management System 13 00 kW SolarPV carport 100 kW Provided \$450,000 \$125,000 \$525,000 \$50,000 wable Energy Systems rgy/Utility Distribution Systen 25kW battery energy storage 125kW Provided \$350,000 \$75,000 \$410,000 \$15,000 258 259 TOTALS: **\$0** \$1,999,800 \$525,250 \$940,000 \$1,605,050

#### U.S. DEPARTMENT OF ENERGY

#### **Direct-Funded Schedule 4: Estimated Savings by ECM**

- In this example, the version without the grant has a lower implementation price, less savings, and longer Simple Payback.
- The version with the grant has a slightly higher implementation price, more savings, and a shorter Simple Payback.

		A		В	C	0	P	Q	R	Y	Z	AA	AB	AC	AD	AE	AF	AG	
	1					N MEASU	RE												
	4			ECM		ы	ь2	cl	c2	f= 0.003412*b1+ d1+e1a+e1b	g = b2+c2+d2+e2 a+e2b	2 h	i	j	k	l = g+i+j+k	m	n = m/l	
Without	5	ECM Number		Short Description	Location/Facili ID	Electric by energy savings	Electric energy savings	Electric demand savings	Electric demand savings	Total energy savings	Total energy cost savings	Water savings	Water savings	O&M cost savings	Other non- energy cost savings	Estimated annual cost savings	Implementation price	on <mark>Simple</mark> Payback	
without	6					(kWh/yr)	(\$/yr)	(kW/mo)	(\$/yr)	(MMBtu/yr)	(\$/yr)	(Kgal/yr)	(\$/yr)	(\$/yr)	(\$/yr)	(\$/yr)	(\$)	(years)	
Grant	7		Project Deve Audit and Pro	elopment Price (PDP)-Technical Energy bject Proposal	/												\$20,000		
	8	1	Advanced e	lectrical meters	Provided	2,500	\$300		\$150	9	\$450					\$450	\$2,550	5.67	
	9	2	Upgrade: Hig	h efficiency Central HVAC	Provided	10,000	\$1,100	2	\$200	34	\$1,300	500	\$20,000			\$21,300	\$56,500	2.65	
	10	3	Upgrade: hig	h efficiency (LED) lighting	Provided	20,000	\$2,200	2	\$200	68	\$2,400					\$2,400	\$23,000	9.58	
	11	4	Major Buildin envelope im	g Renovation - structure, system, provements	Provided	40,000	\$4,400	5	\$500	136	\$4,900			\$8,000	\$46,000	\$58,900	\$1,400,000	23.77	
	12	5	Energy Mana	gement System	Provided	5,000	\$550	3	\$100	17	\$650					\$650	\$38,000	58.46	AG
	257									-	\$0					\$0			
											40 700		600.000	\$0,000	644.000	C02 700	61 540 050	18.40	
	258	3		TOTALS:		77,500	\$8,550	12	\$1,150	264	\$9,700	500	\$20,000	\$8,000	\$46,000	\$83,700	\$1,540,050	10.40	
	258	3		TOTALS:		77,500	\$8,550 b1	12 Ь2	\$1,150 c1	264 c2	\$9,700 0.003412°b1 +d1+e1a+e1	g = b2+c2+d2+e 2a+e2b	\$20,000	38,000 i	,546,000 İ	\$83,700 k	l = g+i+j+k	n	n = m/l
	258	3 4 5	CM Number	ECM Short Description	L	77,500 ocation/Facili ty ID	\$8,550 b1 Electric energy savings	b2 Electric energy savings	\$1,150 c1 Electric demand savings	c2 Electric demand savings	\$9,700 1 - 0.003412*b1 +d1+e1a+e1 Total energy savings	g = b2+c2+d2+e 2a+e2b Total energy cost savings	h Water savings	i ¥ater savings	i D&M cost savings	k Other non- energy cost savings	I = g+i+j+k Estimated annual cost savings	m Implementatio n price	n = m/l Simple Payback
	258	3 4 5 6	C <b>M N</b> umber	ECM Short Description	L	77,500 ocation/Facili ty ID	\$8,550 b1 Electric energy savings (k\Wh/yr)	12 b2 Electric energy savings (\$/yr)	\$1,150 c1 Electric demand savings (k₩/mo)	c2 Electric demand savings (\$/yr)	\$9,700 0.003412*b1 +d1+e1a+e1 Total energy savings (MMBtu/yr)	g = b2+c2+d2+e 2a+e2b Total energy cost savings (\$/yr)	h Water savings (Kgal/yr)	i ¥ater savings (\$/yr)	i D&M cost savings (\$/yr)	k Other non- energy cost savings (\$/yr)	I = g+i+j+k Estimated annual cost savings (\$/yr)	m Implementatio n price (\$)	n = m/l Simple Payback (years)
	258	3 4 5 6 7	CM Number	ECM Short Description Project Development Price (PDP)-Technik and Project Proposal	cal Energy Audit	77,500 ocation/Facili ty ID	\$8,550 b1 Electric energy savings (k₩h/yr)	12 b2 Electric energy savings (\$/yr)	\$1,150 c1 Electric demand savings (k₩/mo)	264 o2 Electric demand savings (\$/yr)	\$9,700 0.003412*b1 +d1+e1a+e1 Total energy savings (MMBtu/yr)	g = b2+c2+d2+e 2a+e2b Total energy cost savings (\$/yr)	h H Hater savings (Kgal/yr)	i ₩ater savings (\$/yr)	i D&M cost savings (\$/yr)	k Other non- energy cost savings (\$/yr)	I = g+i+j+k Estimated annual cost savings (\$/yr)	m Implementatio n price (\$) \$20,000	n = m/l Simple Payback (years)
Wit	258 h	3 4 5 6 7 8	CM Number 1	ECM Short Description Project Development Price (PDP)-Technic and Project Proposal Advanced electrical meters	⊃al Energy Audit F	ocation/Facili ty ID	\$8,550 b1 Electric energy savings (kWh/yr) 2,500	12 b2 Electric energy savings (\$/yr) \$300	s1,150 c1 Electric demand savings (kW/mo)	c2 Electric demand savings (\$/yr) \$150	\$9,700 0.003412'b1 +d1+e1a+e1 Total energy savings (MMBtulyr) 3	500 g = b2+o2+d2+e 2a+e2b Total energy cost savings (\$/yr) \$450	h Water savings (Kgallyr)	i Water savings (\$/yr)	i O&M cost savings (\$/yr)	k Dther non- energy cost savings (¥/yr)	\$1,340,030 I = g+i+j+k Estimated annual cost savings (\$1yr) \$450	m Implementatio n price (\$) \$20,000 \$2,550	n = m/l Simple Payback (years) 5.67
Wit	258 h	3 4 5 6 7 8 9	<b>CM Number</b> 1 2	ECM Short Description Project Development Price (PDP)-Technic and Project Proposal Advanced electrical meters Upgrade: High efficiency Central HVAC	cal Energy Audit F	ocation/Facili ty ID rovided	\$8,550 b1 Electric energy savings (kWh/yr) 2,500 10,000	12 b2 Electric energy savings (\$/yr) \$300 \$1,100	s1,150 c1 Electric demand savings (kW/mo) 2	264 c2 Electric demand savings (\$/yr) \$150 \$200	\$9,700 0.003412'b1 +d1+e1a+e1 Total energy savings (MMBtulyr) 3 34	500 g = b2+o2+d2+e 2a+e2b Total energy cost savings (\$/yr) \$450 \$1,300	h Water savings (Kgallyr) 500	i Water savings (\$/yr) \$20,000	i D&M cost savings (\$/yr)	k Other non- energy cost savings (\$/yr)	\$1.340.030 I = g+i+j+k Estimated annual cost savings (\$/yr) \$450 \$21,300	m Implementation n price (\$) \$20,000 \$2,550 \$56,500	n = m/l Simple Payback (years) 5.67 2.65
Wit Gra	258 h nt	3 4 5 6 7 8 9 10	<b>CM Number</b> 1 2 3	ECM Short Description Project Development Price (PDP)-Technic and Project Proposal Advanced electrical meters Upgrade: High efficiency Central HVAC Upgrade: High efficiency (LED) lighting	cal Energy Audit F F F	77,500 ocation/Facili ty ID rovided rovided	\$8,550 b1 Electric energy savings (kWh/yr) 2,500 10,000 20,000	12 b2 Electric energy savings (\$/yr) \$300 \$1,100 \$2,200	s1,150 c1 Electric demand savings (kW/mo) 2 2 2	264 c2 Electric demand savings (‡/yr) \$150 \$200 \$200	\$9,700 0.003412*b1 +d1+e1a+e1 Total energy savings (MMBtu/yr) 3 3 34 68	500 g = b2+c2+d2+e 2a+e2b Total energy cost savings (#/yr) \$450 \$1,300 \$2,400	h Water savings (Kgal/yr) 500	i Vater savings (\$/yr) \$20,000	i D&M cost savings (\$/yr)	k Dther non- energy cost savings (\$łyr)	\$1,340,030 I = g+i+j+k Estimated annual cost savings (\$/yr) \$450 \$21,300 \$2,400	m Implementation n price (\$) \$20,000 \$2,550 \$56,500 \$23,000	n = m/l Simple Payback (years) 5.67 2.65 3.58
Wit Gra	258 h nt	3 4 5 6 7 8 9 10 11	CM Number 1 2 3 4	ECM Short Description Project Development Price (PDP)-Technic and Project Proposal Advanced electrical meters Upgrade: High efficiency Central HVAC Upgrade: high efficiency (LED) lighting Major Building Renovation – structure, syst improvements	cal Energy Audit F F tem, envelope F	rovided rovided rovided	\$8,550 b1 Electric energy savings (kWhłyr) 2,500 10,000 20,000 40,000	12 b2 Electric energy savings (\$/yr) \$300 \$1,100 \$2,200 \$4,400	s1,150 c1 Electric demand savings (kW/mo) 2 2 2 5	264 c2 Electric demand savings (‡/yr) \$150 \$200 \$200 \$500	\$9,700 0.003412'b1 +d1+e1a+e1 Total energy savings (MMBtulyr) 3 3 34 68 136	500 g = b2+c2+d2+e 2a+e2b Total energy cost savings (\$/yr) \$450 \$1,300 \$2,400 \$4,900	h Water savings (Kgal/yr) 500	i Water savings (\$/yr) \$20,000	\$46,000	k Other non- energy cost savings (\$łyr) \$46,000	\$1,340,030 I = g+i+j+k Estimated annual cost savings (\$/yr) \$450 \$21,300 \$2,400 \$58,900	m Implementatio n price (\$) \$20,000 \$2,550 \$56,500 \$23,000 \$1,400,000	n = m/l Simple Payback (years) 5.67 2.65 9.58 9.58 23.77
Wit Gra	258 h nt	3 4 5 6 7 8 9 10 11 12	CM Number 1 2 3 4 5	ECM Short Description Project Development Price (PDP)-Technic and Project Proposal Advanced electrical meters Upgrade: High efficiency Central HVAC Upgrade: High efficiency (LED) lighting Major Building Renovation – structure, syst Improvements Energy Management System	cal Energy Audit F F tem, envelope F	rovided rovided rovided rovided	\$8,550 b1 Electric energy savings (kWhlyr) 2,500 10,000 20,000 40,000 5,000	12 b2 Electric energy savings (\$/yr) \$300 \$1,100 \$2,200 \$4,400 \$550	s1,150 c1 Electric demand savings (kW/mo) 2 2 2 5 3	264 c2 Electric demand savings (‡/yr) \$150 \$200 \$200 \$200 \$500 \$100	\$9,700 0.003412'b1 +d1+e1a+e1 Total energy savings (MMBtu/yr) 3 3 34 68 136 136	500 g = b2+c2+d2+e 2a+e2b Total energy cost savings (\$/yr) \$450 \$1,300 \$2,400 \$4,900 \$650	h Water savings (Kgal/yr) 500	i ¥ater savings (\$łyr) \$20,000	\$46,000	k Other non- energy cost savings (\$łyr) \$46,000	\$1,340,030           I = g+i+j+k           Estimated annual cost savings           (\$1yr)           \$450           \$21,300           \$2,400           \$58,900           \$650	m Implementatio n price (\$) \$20,000 \$2,550 \$56,500 \$23,000 \$1,400,000 \$38,000	n = m/l Simple Payback (years) 5.67 2.65 3.58 3.58 23.77 58.46
Wit Gra	258 h nt	3 4 5 6 7 8 9 10 11 12 13	CM Number 1 2 3 4 5 8	ECM Short Description Project Development Price (PDP)-Technic and Project Proposal Advanced electrical meters Upgrade: High efficiency Central HVAC Upgrade: High efficiency (LED) lighting Major Building Renovation – structure, syst improvements Energy Management System 100 kW SolarPV carport	cal Energy Audit F F tem, envelope F F F	rovided rovided rovided rovided rovided rovided rovided	\$8,550           b1           Electric energy savings           (k√h/yr)           2,500           10,000           20,000           40,000           5,000           100,000	12 b2 Electric energy savings (\$/yr) \$300 \$1,100 \$2,200 \$4,400 \$550 \$41,000	S1,150 c1 Electric demand savings (k₩/mo) 2 2 2 5 3 60	264 c2 Electric demand savings (‡/yr) \$150 \$200 \$200 \$200 \$200 \$200 \$200 \$200 \$2	\$9,700 0.003412*b1 +d1+e1a+e1 Total energy savings (MMBtu/yr) 9 34 68 136 137 341	9 =           b2+c2+d2+e           2a+e2b           Total energy           cost savings           (\$/yr)           \$450           \$1,300           \$2,400           \$4,900           \$650           \$14,000	k k Water savings (Kgal/yr) 500	i Water savings (\$/yr) \$20,000	\$46,000	k Dther non- energy cost savings (\$/yr) \$46,000	\$1.340.030           I = g+i+j+k           Estimated annual cost savings           (\$1yr)           \$450           \$21,300           \$2,400           \$58,900           \$650           \$14,000	m Implementatio n price \$20,000 \$2,550 \$56,500 \$23,000 \$1,400,000 \$38,000 \$50,000	n = m/l Simple Payback (years) 5.67 2.65 9.58 23.77 58.46 3.57
Wit Gra	258 h nt	3 4 5 6 7 8 9 10 11 12 13 14	CM Number 1 2 3 4 5 8 8 9	ECM Short Description Project Development Price (PDP)-Technic and Project Proposal Advanced electrical meters Upgrade: High efficiency Central HVAC Upgrade: High efficiency (LED) lighting Major Building Renovation – structure, syst improvements Energy Management System 100 kW SolarPV carport 125kW battery energy storage	cal Energy Audit F F tem, envelope F F F F F F	rovided rovided rovided rovided rovided rovided rovided rovided	\$8,550           b1           Electric energy savings           (k\/h/yr)           2,500           10,000           20,000           40,000           100,000           40,000	12 b2 Electric energy savings (\$/yr) \$300 \$1,100 \$2,200 \$4,400 \$550 \$41,000 \$4,400	S1,150 c1 Electric demand savings (k₩/mo) 2 2 2 2 3 60 30	264 c2 Electric demand savings (‡/yr) \$150 \$200 \$200 \$200 \$200 \$200 \$200 \$200 \$2	\$9,700 0.003412*b1 +d1+e1a+e1 Total energy savings (MMBtu/yr) 9 34 68 136 136 136	9 =           b2+c2+d2+e           2a+e2b           Total energy           cost savings           (\$/yr)           \$450           \$1,300           \$2,400           \$4,900           \$4,900           \$41,000           \$5,900	\$20,000 h ₩ater savings (Kgal/yr) 500 0 0 0 0 0 0 0 0 0 0 0 0	i Water savings (\$/yr) \$20,000	\$46,000	k Dther non- energy cost savings (\$/yr) \$46,000	\$1,340,030           I = g+i+j+k           Estimated annual cost savings           (\$1yr)           \$450           \$21,300           \$2,400           \$58,900           \$650           \$14,000           \$5,900	m Implementatio n price \$20,000 \$2,550 \$56,500 \$23,000 \$1,400,000 \$38,000 \$50,000 \$15,000	n = m/l Simple Payback (years) 5.67 2.65 9.58 23.77 58.46 3.57 2.54
Wit Gra	h h	3 4 5 6 7 8 9 9 10 11 12 13 13 14 257	CM Number 1 2 3 4 5 8 8 9	ECM Short Description Project Development Price (PDP)-Technic and Project Proposal Advanced electrical meters Upgrade: High efficiency Central HVAC Upgrade: High efficiency (LED) lighting Major Building Renovation – structure, syst improvements Energy Management System 100 kW SolarPV carport 125kW battery energy storage	cal Energy Audit F F tem, envelope F F F	rovided rovided rovided rovided rovided rovided rovided	\$8,550       b1       Electric energy savings       (kWh/yr)       2,500       10,000       20,000       40,000       5,000       100,000       40,000	12 b2 Electric energy savings (\$/yr) \$300 \$1,100 \$2,200 \$4,400 \$550 \$11,000 \$4,400	\$1,150         c1         Electric         demand         savings         (k₩/mo)         2         2         2         3         60         30	264 c2 Electric demand savings (‡/yr) \$150 \$200 \$200 \$200 \$200 \$200 \$200 \$200 \$2	\$9,700 0.003412*b1 +d1+e1a+e1 Total energy savings (MMBtulyr) 9 34 68 136 136 137 341 136	9           b2+c2+d2+e           2a+e2b           Total energy           cost savings           (\$/yr)           \$450           \$1,300           \$2,400           \$4,900           \$4,900           \$4,900           \$45,900           \$11,000           \$5,900           \$0	k k Water savings (Kgal/yr) 500	i Water savings (\$/yr) \$20,000	\$46,000	k Dther non- energy cost savings (\$/yr) \$46,000	\$1,340,030           I = g+i+j+k           Estimated annual cost savings           (\$1yr)           \$450           \$21,300           \$2,400           \$58,900           \$650           \$14,000           \$5,900	m Implementatio n price \$20,000 \$2,550 \$56,500 \$23,000 \$1,400,000 \$38,000 \$50,000 \$15,000	n = m/l Simple Payback (years) 5.67 2.65 9.58 23.77 58.46 3.57 2.54

### **Direct-Funded Schedule 4g: Estimated GHG Savings by ECM**

- In this example, the project with the grant garners significantly greater Scope 1 and Scope 2 emission reductions.
- The grant enabled adding the two decarbonization measures.

A B	С	D	E	F	G	н	1	J	К	L	м	N	0	P	Q	R	S	Т	
					SCHEDUL	E #4g													
2			GHG EN	<u>MISSIONS B</u>	<u>BY ENERGY (</u>	CONSERV	ATION MEA	SURE											
4 ECM		ы			d1			e1a			e1b			f = 0.003412*1 1+d1+e1a+ e1b	b h				
Without Grant 5 ECM Number Short Description	eGrid State Region (Add a drop down showing the	Electric energy savings	kg CO2e/Mmbtu	Electric GHG	Natural gas savings C	kg O2e/MMBtu	Natural gas GHG	Other Savings Type 1: C leating Oil	kg :O2e/MMBtu	Other Savings S Type 1: Heating Oil	Other Davings Fype 2: Other	kg D2e/MMBt u	Other Savings Type 2: Other	Total energy savings	₩ater savings	Annua Scope ; CO2e Reductio	I Annual 1 Scope 2 CO2e ons Reductio s	Annual Tota CO2e n Reductions	11 5
6	regions)	(k₩h/yr)		kg CO2e	(MMBtu/yr)		kg CO2e	(MMBtu/yr)		kg CO2e	IMBtu/yr		kg CO2e	(MMBtu/yr	) (Kgal/yr	) kg CO2	e kg CO2e	kg CO2e	
Project Development Price (PDP)-Technic 7 Audit and Project Proposal	al Energy																		
8 1 Advanced electrical meters	SERC South	2,500	115	981	0	53	0	0	74	0	0	0	0		9 0	0	981	981	
9 2 Upgrade: High efficiency Central HVAC	SERC South	10,000	115	3,925	0	53	0	0	74	0	0	0	0	3	4 500	0	3,925	3,925	
10 3 Upgrade: high efficiency (LED) lighting	SERC South	20,000	115	7,850	0	53	0	0	74	0	0	0	0	6	8 0	0	7,850	7,850	
4 Major Building Renovation - structure, syst 11 envelope improvements	<sup>m,</sup> SERC South	40,000	115	15,700	0	53	0	0	74	0	0	0	0	13	6 0	0	15,700	15,700	
12 5 Energy Management System	SERC South	5,000	115	1,963	0	53	0	0	74	0	0	0	0	1	7 0	0	1,963	1,963	
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ECM											e1b			0.1	f = 003412°Ь	Ь			
•		ы			d1			e1a						14	•d1+e1a+ e1b				
ECM Number Short Description	eGrid State Region	Electric energy savings	c kg CO2e/Mmb	Electric GHG	d1 Natural ga: savings	s kg CO2e/MM	Natural g Btu GHG	e1a Other as Saving Type 1 Other	s kg : CO2e/MM	Other Saving: Btu Type 1: Other	Othe Savin Type Othe	r gs k 2: CO2e/I r	g S MMBtu T	Other avings ype 2: Other	+d1+e1a+ e1b Total energy savings	₩ater savings	Annual Scope 1 CO2e Reductions	Annual Scope 2 CO2e Reduction s	nual Total CO2e ductions
ECM Number Short Description	eGrid State Region	Electric energy savings (k\th/yr	c kg CO2e/Mmb	tu Electric GHG kg CO2e	Natural ga: savings (MMBtu/yr	s kg CO2e/MM	Btu Natural g GHG kg CO2	ela Other Saving Type 1 Other	s kg : CO2e/MM	Btu Dther Saving: Type 1: Other kg CO2	e (MMBto	r k gs k 2: CO2ell r	g S MMBtu T	Other avings ype 2: Other	+d1+e1a+ e1b Total energy savings IMBtu/yr)	₩ater savings (Kgalłyr)	Annual Scope 1 CO2e Reductions kg CO2e	Annual Scope 2 CO2e Reduction s kg CO2e kg	nual Total CO2e ductions g CO2e
With 6 Project Development Price (PDP)- Energy Audit and Project Proposa	eGrid State Region	Electric energy savings (k\thetahlyr	kg CO2e/Mmb	tu Electric GHG kg CO2e	d1 Natural ga: savings e (MMBtu/yr)	s kg CO2e/MM	Btu Natural g GHG kg CO2	e1a Other Saving Type 1 Other e (MMBtul	s kg CO2e/MM yr)	Btu Type 1: Other Bty CO2	e (MMBtu	r k 35 k 2: CO2ell r	g S MMBtu T	Other avings ype 2: Other g CO2e (M	•d1+e1a+ e1b Total energy savings	Water savings (Kgal/yr)	Annual Scope 1 CO2e Reductions kg CO2e	Annual Scope 2 CO2e Reduction s kg CO2e	nual Total CO2e Iductions g CO2e
With 6 Froject Development Price (PDP)- Energy Audit and Project Proposa 8 1 Advanced electrical meters	eGrid State Region fechnical SERC South	Electric energy savings (kWh/yr 2,500	kg CO2e/Mmb/	tu Electric GHG kg CO2e	d1 Natural ga: savings (MMBtulyr) 0	kg CO2e/MM	Btu Natural g GHG kg CO2	ela Other Saving Type 1 Other e (MMBtu/ 0	s kg CO2e/MM	Btu Cother Saving: Type 1: Other kg CO2	e (MMBtu ) 0 0 0 0 0 0 0	r js k 2: CO2e/l i/yr	g MMBtu T ks	0 ther avings ype 2: 0 ther g CO2e (M 0	rd1+e1a+ e1b Total energy savings IMBtu/yr)	Vater savings (Kgał/yr)	Annual Scope 1 CO2e Reductions kg CO2e	Annual Scope 2 CO2e Reduction s kg CO2e kg	nual Total CO2e eductions g CO2e 981
With 6 Short Description Froject Development Price (PDP)- Energy Audit and Project Proposa 1 Advanced electrical meters 9 2 Upgrade: High efficiency Central H	fechnical	Electric energy savings (kWh/yr 2,500 10,000	kg CO2e/Mmbr 115 115	ku Electric GHG kg CO2e 981 3,925	<ul> <li>All and a second /li></ul>	<ul> <li>kg</li> <li>co2e/MM</li> <li>53</li> </ul>	Btu Natural g GHG kg CO2 0 0	ela Other Saving Type 1 Other (MMBtu/ 0 0	s: CO2e/MM	Btu Saving: Type 1: Other kg CO2	e (MMBto (MMBto ) 0 0 0 0	r k 35 k 2: CO2e/l i/yr	g S MMBtu T kg	Other avings jype 2: Other CO2e (M 0 0	•d1+e1a+ e1b Total energy savings IMBtu/yr) 9 34	Vater savings (Kgal/yr) 0 500 [	Annual Scope 1 CO2e Reductions kg CO2e	Annual Scope 2 CD2e Reduction s kg CD2e kg 981 3,325	nual Total CO2e eductions g CO2e 981 3,925
With Grant 5 5 ECM Number Short Description Project Development Price (PDP)- Energy Audit and Project Proposa 8 1 Advanced electrical meters 9 2 Upgrade: High efficiency (LED) ligh 10 3 Upgrade: high efficiency (LED) ligh	rechnical SERC South VAC SERC South ing SERC South	Electric energy savings (k\dashely 2,500 10,000 20,000	kg cO2e/Mmbr 115 115 115	Electric GHG           kg CO2e           981           3,925           7,850	<ul> <li>Alteration of the second /li></ul>	kg CO2e/MM 53 53 53	Btu Ratural g GHG kg CO2 kg CO2 co kg CO2 kg CO2 co kg CO2 co co kg CO2 co co co co co co co co co co co co co	ela Other Saving Type 1 Other e (MMBtu/ 0 0 0	s: CO2e/MM	Btu CO2	s Othe Savin Type Othe (MMBto ) 0 0 0 0	r 155 k CD2ell Ilyr 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	g S MMBtu T kg	0 ther avings ype 2: 0 ther g CO2e (M 0 0 0	rd1+e1a+ e1b Total energy savings IMBtu/yr) 9 34 68	Water savings (Kgallyr) 0 500 1 0	Annual Scope 1 CO2e Reductions kg CO2e	Annual Scope 2 CO2e Reduction s kg CO2e kg 381 3,325 7,850	g CO2e 981 3,925 7,850
With Grant 5 6 7 8 1 4 1 4 1 4 1 5 5 5 5 5 5 5 5 5 5 5 5 5	Fechnical SERC South VAC SERC South ing SERC South re, system, SERC South	BI           Electric energy savings           (k\H)r           2,500           10,000           20,000           40,000	kg CO2e/Mmbd CO2e/Mmbd 115 115 115 115 115	Electric GHG           kg CO2e           381           3,925           7,850           15,700	<ul> <li>Altural gas savings</li> <li>(MMBtulyr)</li> <li>0</li> <li>0</li> <li>0</li> <li>0</li> <li>0</li> <li>0</li> </ul>	kg CO2e/MM 5 53 53 53 53	Natural g GHG           kg CO2	ela Other Saving Type 1 Other e (MMBtu/ 0 0 0 0 0 0 0 0 0	yr) CO2e/MM 0 0 0 0 0	Btu Cuber Saving: Type 1: Other kg CO2 kg CO2 0 0 0 0 0 0 0	e (MMBt)	r k 35 2: CO2ell ilyr 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	g S MMBtu S kg	Other avings ype 2: Other	d1+e1a+ e1b Total energy savings IMBtulyr) IMBtulyr) 9 34 68 136	Water savings           (Kgal/yr)           0           500           0           0           0           0	Annual Scope 1 CD2e Reductions kg CD2e 0 0 0 0 0 0	Annual Scope 2 CD2e         Ann Annual Second Research           kg CO2e         kg           381	981 3.925 7.850 15,700
With Grant 5 ECM Number Short Description 5 6 7 Project Development Price (PDP)- Energy Audit and Project Proposa 8 1 Advanced electrical meters 9 2 Upgrade: High efficiency CLED) ligh 10 3 Upgrade: High efficiency (LED) ligh 11 4 envelope Building Renovation - struct 12 5 Energy Management System	Fechnical SERC South VAC SERC South ing SERC South re, system, SERC South SERC South SERC South	BI           Electric energy savings           (kWh/yr           2,500           10,000           20,000           40,000           5,000	kg CO2e/Mmbd CO2e/Mmbd 115 115 115 115 115 115	Electric GHG           kg CO2e           381           3,925           7,850           15,700           1,963	<ul> <li>Altural ga: savings</li> <li>(MMBtulyr)</li> <li>0</li> </ul>	kg CO2e/MM 5 53 53 53 53 53	Natural g GHG           kg CO2           v           0           0           0           0           0           0           0           0           0           0           0           0           0           0           0           0           0	ela Other Saving Type 1 Other (MMBtu/ 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	s kg CO2e/MM yr) 0 0 0 0 0 0 0	Btu Conternation Saving: Type 1: Other kg CO2 kg CO2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	e (MMBturner) (MM	r k 35 CO2ell Ilyr CO2ell CO2 CO2 CO2 CO2 CO2 CO2 CO2 CO2 CO2 CO2	g S MMBtu S I kg ) ) ) ) ) ) ) ) ) )	Other avings ype 2: Other	dl+ela+ elb Total energy savings IMBtułyr) IMBtułyr) 34 68 136 136	∀ater savings           (Kgałłyr)           0           500           0           0           0           0           0           0           0	Annual Scope 1 CO2e Reductions kg CO2e 0 0 0 0 0 0 0 0	Annual Scope 2 CD2e         Annual Annual Scope 2 Reduction           kg CO2e         kg           381         1           3,325         1           15,700         1           1,963         1	nual Total CO2e eductions g CO2e 981 3,925 7,850 15,700 1,963
With Grant 9 2 Upgrade: High efficiency Central 10 3 Upgrade: High efficiency Central 11 4 Major Building Renovation - struct 12 5 Energy Management System 13 8 100 kW SolarPV carport	rechnical SERC South VAC SERC South ing SERC South ref, system, SERC South SERC South SERC South	BI           Electric energy savings           (kWh/yr           2,500           10,000           20,000           40,000           5,000           100,000	kg CO2e//Mmb/ CO2e//Mmb/ 115 115 115 115 115 115 115 115	Electric GHG           kg CO2e           381           3,925           7,850           15,700           1,963           39,250	d1           Natural ga: savings           (MMBtu/yr)           0           0           0           0           0           0           0           0           0           0           0           0           0           0           0           0           0           0           0	CO2e/MM CO2e/MM CO2e/MM CO2e/MM CO2e/MM CO2e/CM CO2E/C	Natural g GHG           kg CO2	ela Other Saving Type 1 Other (MMBtu/ O O O O O O O O O O O O O	s co2e/MM	Btu Contraction Contractic	e Contraction Cont	r k ss CO2ell r CO2 CO2 CO2 CO2 CO2 CO2	g MMBtu S 7 ks )	0 ther avings ype 2: 0 ther 0 (M 0 0 0 0 0 0 0 0 0 0	dl+ela+ elb Total energy savings IMBtudyr) 9 34 68 136 136 17 341	Water           savings           (Kgał/yr)           0           500           0           0           0           0           0           0           0           0           0           0           0           0           0           0           0	Annual Scope 1 CO2e Reductions kg CO2e 0 0 0 0 0 0 0 0 0 0 0 0	Annual Scope 2 (D22e aduction s         Annual Annual (Re Re Re Re Re Re Re Re Re Re Re Re Re R	<b>g CO2e</b> 981 3,925 7,850 15,700 39,250
With Grant 9 2 Upgrade: High efficiency Central 10 3 Upgrade: High efficiency Central 11 4 Major Building Renovation - struct 12 5 Energy Management System 13 8 100 kW SolarPV carport 14 9 125kW battery energy storage	rechnical SERC South VAC SERC South ref, system, SERC South SERC South SERC South SERC South SERC South SERC South	BI           Electric energy savings           (kWh/yr           2,500           10,000           20,000           40,000           5,000           100,000	kg CO2e//Mmbd CO2e//Mmbd 115 115 115 115 115 115 115 115 115 11	Electric GHG           kg CO2e           381           3,925           7,850           15,700           39,250           15,700           15,700           15,700	<ul> <li>d1</li> <li>Natural ga: savings</li> <li>(MMBtu/yr)</li> <li>0</li> </ul>	<ul> <li>kg CO2e/MM</li> <li>53</li> </ul>	Natural g GHG           kg CO2	ela Other Saving Type 1 Other (MMBtu/ 0 0 0 0 0 0 0 0 0 0 0 0 0	s kg CO2e/MM yr) 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Btu Conternation 10 Conternati	e (MMBtu Be (MMB	r k ss co2eil r co2eil r co2eil r co co co co co co co co co co	g MMBtu S kg )	0 ther avings ype 2: 0 ther 0 CO2e (M 0 0 0 0 0 0 0 0 0 0 0 0	dl+ela+ elb Total energy savings IMBtudyr) 9 344 688 136 136 137 341 136	Vater           savings           (Kgał/yr)           0           500           0           0           0           0           0           0           0           0           0           0           0           0           0           0           0           0           0	Annual Scope 1 CO2e Reductions kg CO2e 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Annual Scope 2 (D2e Reduction s         Ann Re           Reduction s         Manual (Reduction s)           3927         Manual (Reduction s)           3925         Manual (Reduction s)           15,700         Manual (Reduction s)           15,700         Manual (Reduction s)	nual Total CO2e eductions g CO2e 981 3,925 7,850 15,700 1,963 39,250 15,700

### Use of the ePB Template Information for AFFECT

#### How Your ePB Data Informs the Grant Review (1 of 2)

During the grant merit review process, the AFFECT team will...

- Provide
  - All metrics to the independent merit reviewers as part the technical review:
    - Criterion 1: Cost Effectiveness (20%)
    - Criterion 2: Anticipated Energy and Cost Savings (15%)
    - Criterion 4: Programmatic Priorities and Policy Considerations (20%)

Note: ePB templates are required for all Topic Area 2 and Topic Area 3 AFFECT BIL FAC applications.

#### How Your ePB Data Informs the Grant Review (2 of 2)

During the grant merit review process, the AFFECT team will...

- Calculate
  - A Savings-to-Investment Ratio (SIR) using information from Schedule 4 (savings) and Schedule 2a (investment).
  - A Net Present Value (NPV) using the estimated annual cost savings and annual payments information from Schedule 1, using a 3% discount rate.
- Pull
  - Simple Payback from Schedule 4.
  - Energy, water, and cost savings from Schedule 4.
  - GHG savings from Schedule 4g.

#### ePB General Technical Support & Training

- Website and account registration: <u>https://eprojectbuilder.lbl.gov</u>
- ePB Help/Documentation page: <u>https://eprojectbuilder.lbl.gov/help</u>
  - Access template, training documentation, and training videos (no log-in needed)
- ePB Advanced Training Webinar, Wednesday May 22, 2024, 2:00 - 3:30 p.m. ET
  - Register here: <u>https://go.lbl.gov/ePB-</u> <u>Advanced-May2024</u>
- ePB technical assistance: <a href="mailto:epb-support@lbl.gov">epb-support@lbl.gov</a>

Upcoming Training Webina	'S ~	111	Upcoming Training Webinars
Data Templates	<u>^</u>	6	Data Templates
	This version of the	2	Training Documentation
	data upload template provides automated	Ê	Key Features and Benefits of ePX
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	financial scenarios. This ePB version of the data upload		
Non-Calculating Template 3.0	template provides no calculations. All information must be entered manually.		
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Help, Documentation and Training

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### **Thank You!**