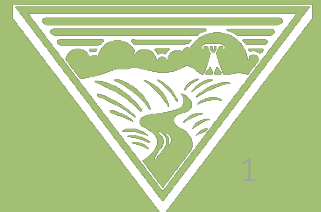


2020-2021 Custom Industrial Evaluation (Option 2 Utilities) Research Plan

September 30, 2021



Utilities with sample projects

Utility	"# measures (primary sample)	"# measures (backup sample)
EWEB	2	0
Seattle City Light	9	2
Snohomish PUD	6	0
Tacoma Power	5	1
Total	22	3

Agenda

Why Evaluation?

Background and Objectives

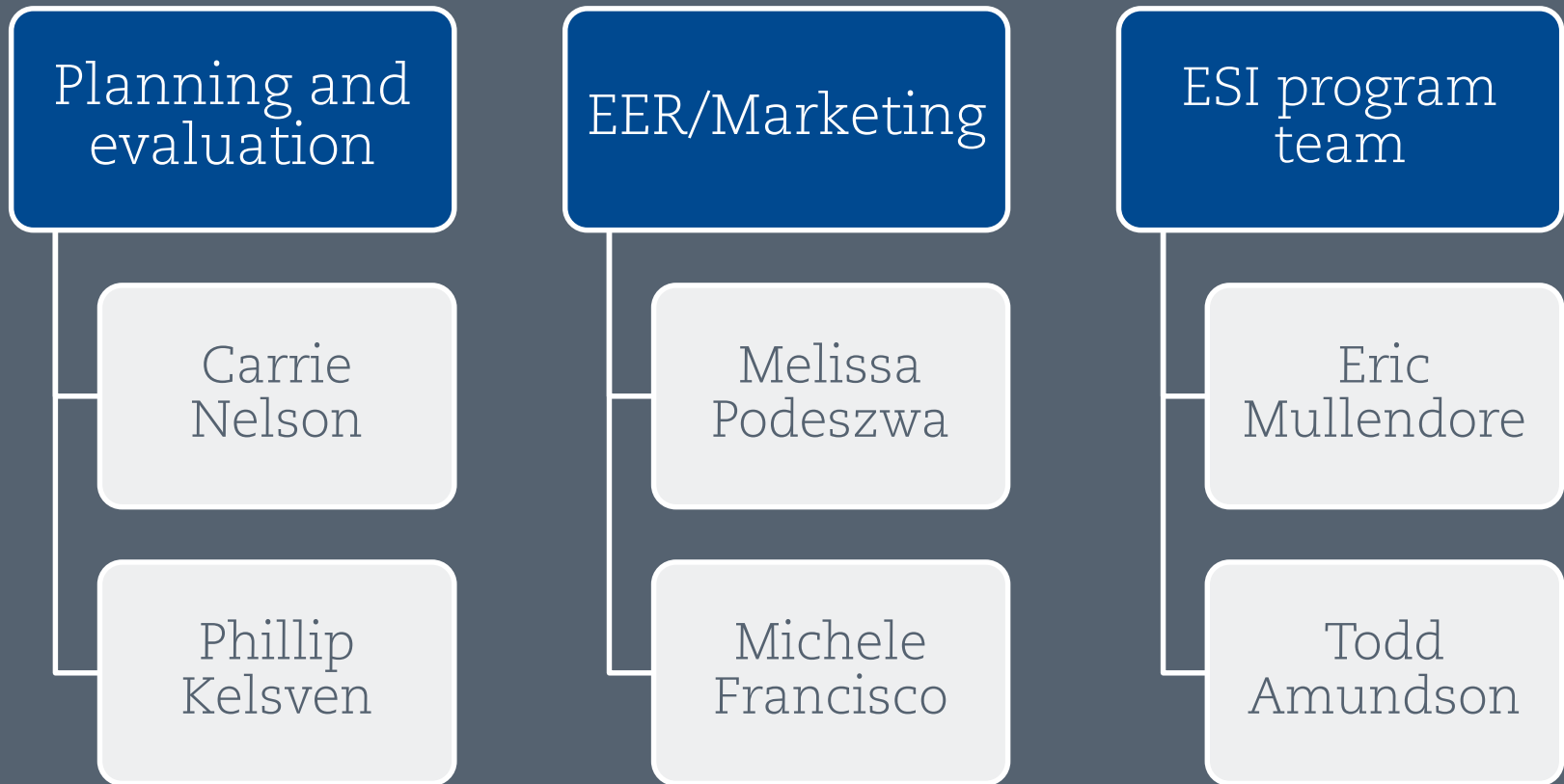
Sample Design

Data Collection and Analysis

Contact Protocols and Schedules

Next Steps and Q&A

BPA core team



Contractor Team



Why evaluation?



**What do
we all
want?**

Energy
efficiency
programs that
save customers
money and
energy.

To be
trustworthy
stewards of
their money.

Evaluation

What did we achieve?

How do we improve?



Impact evaluation



Savings reliability
with independent
verification



Program
improvement
opportunities

Relevant evaluation policies

Implementation Manual

- Identifies implementation requirements and includes requirement to provide access to project, documentation and billing data for evaluation and oversight purposes.

BPA internal policies

- Defines BPA's impact evaluation activities as sampled out of at least 90% of portfolio every 4 years. Consistent with RTF Guidelines and national standards.
- BPA M&V Protocols

Evaluation is separate from BPA's COTR oversight

Background and objectives

Overview of FY21/22 Evaluation areas



Custom and C/I/Ag Lighting

Engineering-based
evaluation of projects



Strategic Energy Management

Persistence assessment to inform
measure life and (if feasible)
assessment of how capital
measures affect SEM savings

Schedule

		FY21				FY22				FY23				FY24			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Option 1 Utilities																	
Industrial	Custom																
Option 2 Utilities																	
Industrial	Custom																
Strategic Energy Mgmt																	
SEM	Persistence																
SEM	Capital																

Schedule TBD:

Option 1 Utilities:																	
C/Ag	Lighting																
C/Ag	Custom																
Option 2 Utilities:																	
C/I/Ag	Lighting																
C/Ag	Custom																
ESRP	Federal																

Data collection/analysis

Draft report and review

Final report and communicating results

Custom Industrial Evaluation objectives

1

Estimate first-year kWh savings and cost-effectiveness

- For the domain and by end use (no utility-specific findings)
- Both as-operated conditions and expected conditions (had COVID-19 not occurred)

2

Develop recommendations to improve M&V savings estimates (including ECwV)

Sample design

Sampling Strategy

BPA internal policies strive for relative error of 10% at the 90% confidence level (90/10), with a minimum of 90/30

For Option 1 & 2 Custom Industrial, our goal is to exceed 90/10 with 80 sample points (22 measures for Option 2 utilities)

**Sampling unit is a measure,
(Technology/Activity/Practice) for a single project at a distinct site**

Based on projects completed between Q2 2020 and Q1 2021

Sample stratification by project size

Custom Industrial (Option 2 Utilities) sample plan: End use

End Use	Sample size (measures)
Compressed Air	5
HVAC	3
Motors/Drives	3
Process Loads	5
Refrigeration	5
Water Heating	1
Total	22

Data collection and analysis

Data collection process

File Review leveraging BPA program team and utility data

Project engineer (utility and 3rd party implementers) telephone / email discussions

End use customer telephone / email discussions and site visits

Data: Trend metering / billing data / weather data

Site-specific data to support analysis

Data Collection and Analysis Topics

Addressing COVID-19:



Savings
calculated
based on
as-operated

&

Savings based
on expected
conditions
**had COVID-19
not occurred**

Rely on self-report of COVID-19
impacts (file review, interviews, etc.)

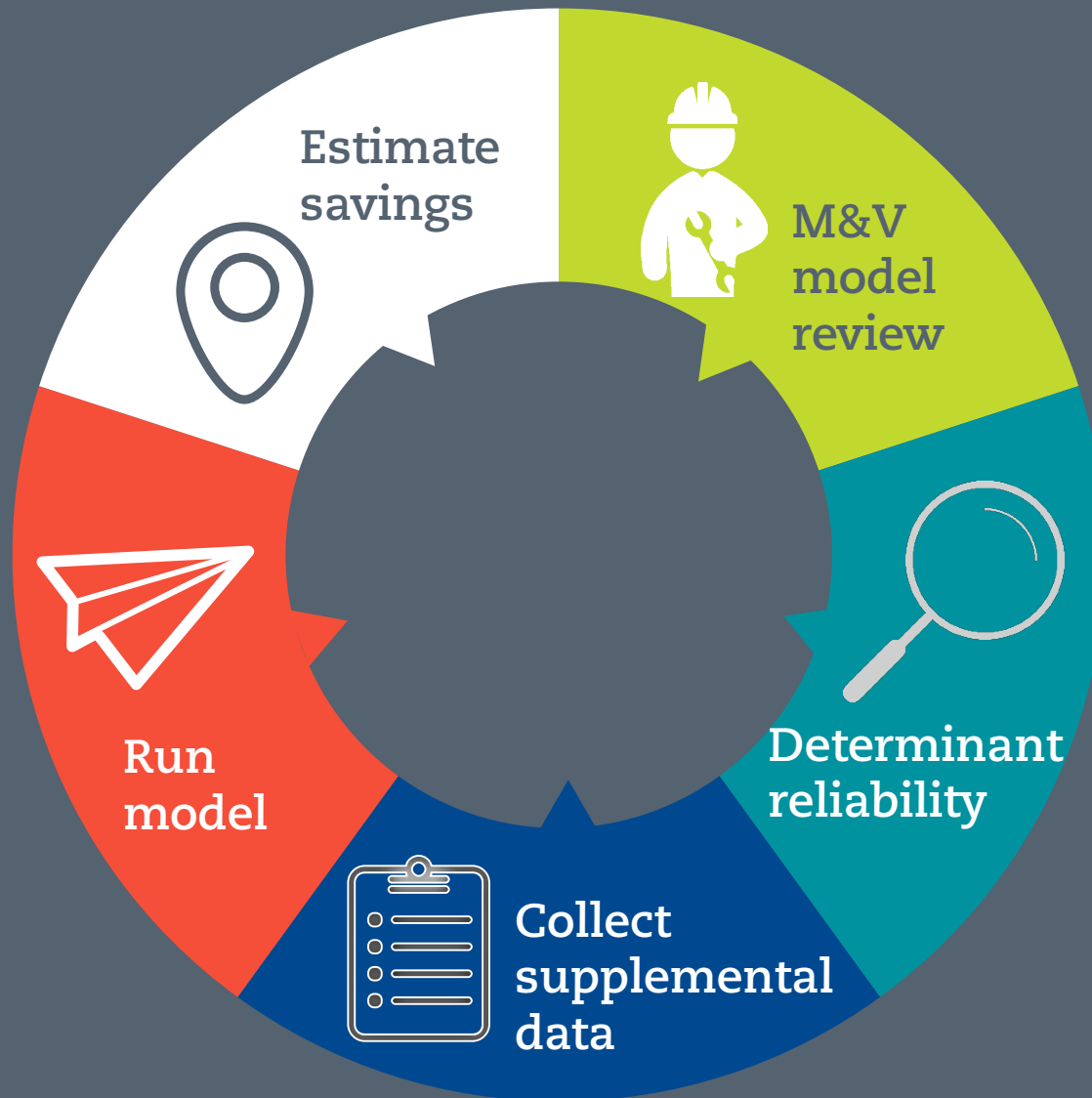
Data Collection and Analysis Topics



Engineering Calculations with Verification (ECxV)

- Use an ECwV protocol to estimate savings for each measure
- Compare results to best practical evaluation results and BPA ECwV result (where available)

Site-level analysis process



End use customer data collection



End use customer
telephone / email discussions

- Customers answer any outstanding questions
- Schedule site visits if necessary
- Due to COVID-19, may place greater emphasis on file review and telephone/email surveys

Reporting

Evaluated savings (first-year kWh), realization rates, and cost effectiveness

- First-year savings and realization rates (ratio of claimed to evaluated savings) for the domain and by end use (no utility-specific findings)
- As-operated and had COVID-19 not occurred
- Comparison of ECwV-evaluated results v. other results

Recommendations

- Improve M&V savings estimates
- Any improvements to how ECwV protocols are applied
- For future research and data collection, if relevant

Schedule and contact protocols

Research schedule

	2021						2022							
	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
Project Kickoff		█	█											
Project File Data Collection				█	█	█	█	█						
Site Specific Notifications						█	█							
End-user Data Collection							█	█						
Site Specific Results								█	█	█				
Report/Highlights/PPT									█	█	█	█	█	
Program Response Memos													█	█



Contact principles



Early notification

of projects, timelines, and requirements
(Utilities should notify customers of study in Oct.)



Utility feedback

Share details of the
evaluation plan and data request



Reasonable timelines

for data collection;
escalation protocol if timelines missed



You will be notified at least 1 week
before the evaluation team contacts
your customers

Utility notification



- ✓ Notification email
- ✓ Research plan webinar
- Sampled site list
- Please notify your customers at beginning of project

Project documentation



- We will collect nearly all project documentation from each utility's point of contact
- If needed, utility / end user may use NDAs (BPA and Evaluator currently have NDA)
- Evaluation team may set up an interview with your project engineer through the utility point of contact

Customer contact



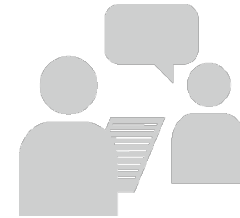
Please notify your customers at beginning of project

- 1 week prior to contacting your customer, evaluation lead will notify utility with general description of information to be collected from site
- Evaluation team will follow safety and privacy requirements
- If needed, we will use NDAs with your customers

Utility communications



Emails



Ad hoc meetings



Webinars



**Announcements
and updates**

Next steps

Email notification from BPA



Webinar



Evaluation team will gather data from BPA, utilities and your customers



(notifying you at least one week beforehand)

You received customer-specific information

You notify selected customers in the evaluation sample that they may be contacted by the evaluation team



Questions?

Thank you!

www.bpa.gov/goto/evaluation

evaluation@bpa.gov

Bonneville
POWER ADMINISTRATION

