

FEDERAL UTILITY PARTNERSHIP WORKING GROUP SEMINAR

May 2-3, 2019
San Diego, CA

Special Session 2: UESC Technical Project Focus

Hosted by:



Performance Focused Project Development

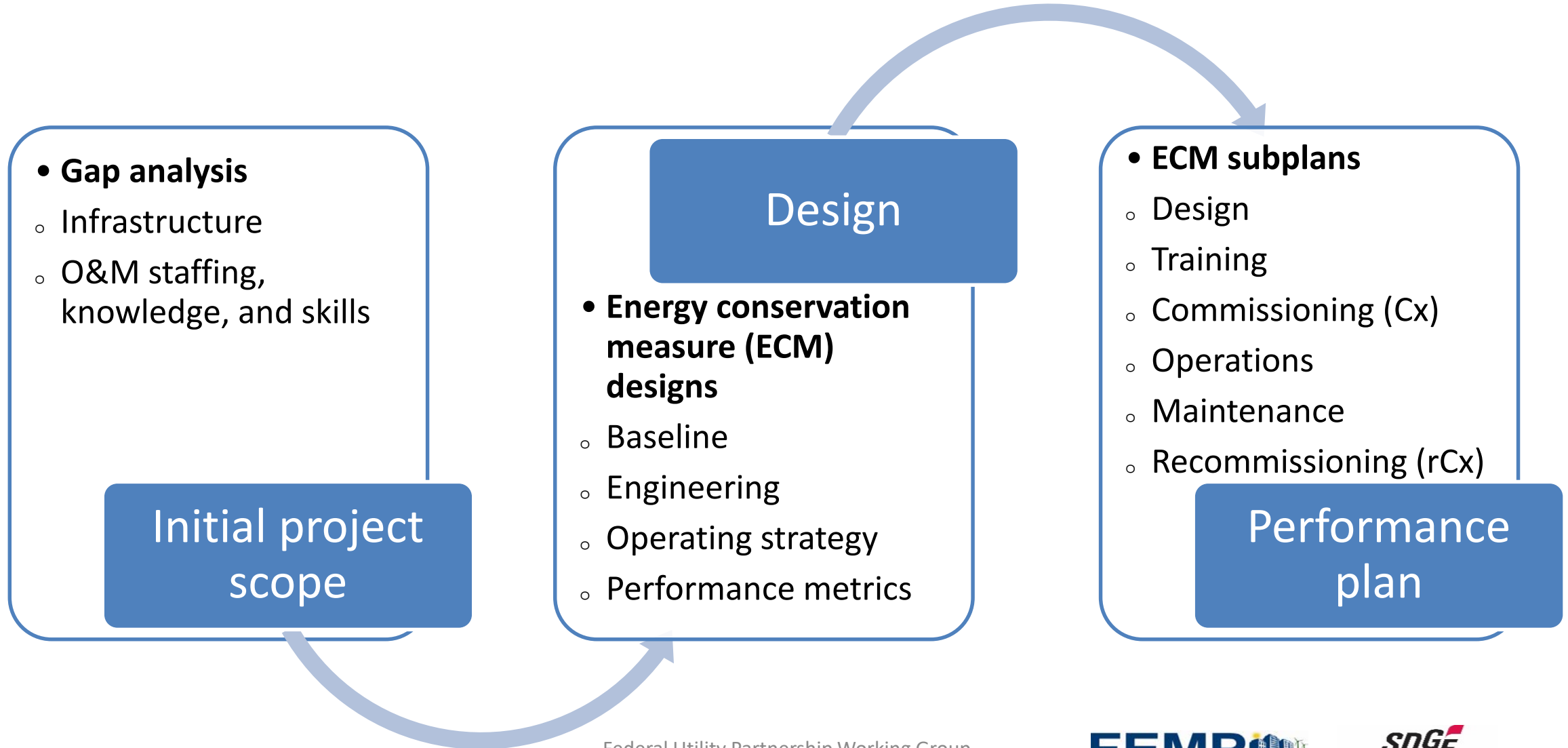
Deb Vasquez

National Renewable Energy Laboratory

Agenda

- Introductions
- Performance-focused project development
 - Performance planning for UESC
 - UESC Project Development Report Template
 - Discussion part I
- eProject Builder for UESC
 - Discussion part II

Performance-Focused Project Development



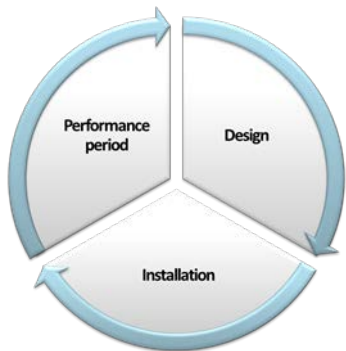
Develop a Performance Plan

Agency develops performance requirements

- Identify performance gaps
- Task Order (T.O.) language specific to performance
- Ensure final performance plan meets T.O. requirements

Utility develops an actionable performance plan addressing:

- Energy conservation measures (ECM) designs
- Comprehensive performance training
- Commissioning (Cx)
- Operations
- Maintenance
- Recommissioning (rCx)



Develop a Performance Plan, Continued

Subplans

1. Design – sufficient detail, accurate baseline, operating strategy, performance metrics
2. Training – comprehensive, long-term performance focused
3. Commissioning (Cx)*
4. Operations as specified in design
5. Maintenance – essential to sustaining performance
6. Recommissioning (rCx)*

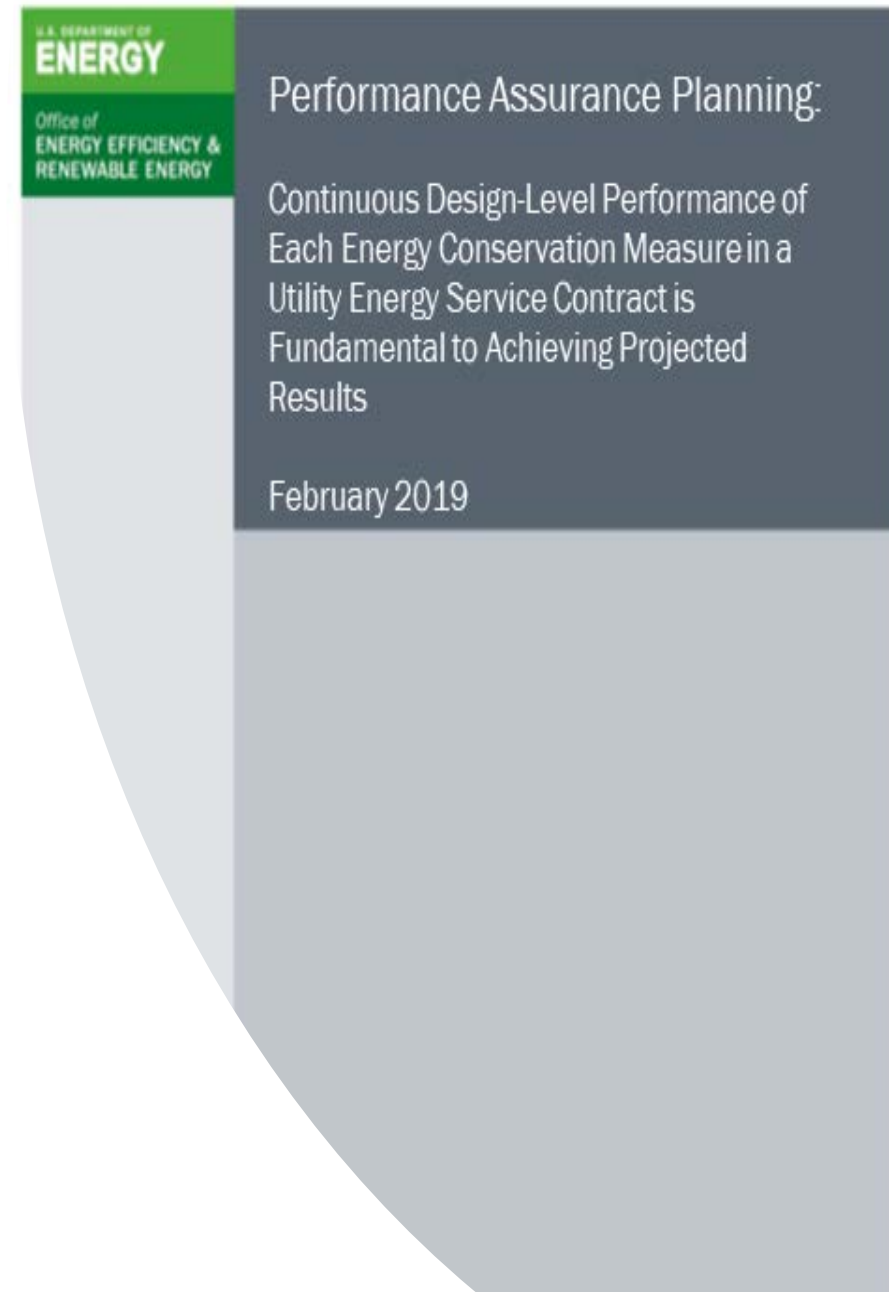
* Actionable procedures, schedules, and worksheets for measuring, verifying, adjusting, and documenting actual performance.

FEMP Resource: Performance Assurance Planning

Agency and Utility teams use this resource to

- Discuss performance needs e.g. gaps in knowledge, experience, staffing
- Discuss plan expectations, establish requirements, and agree on deliverables

https://www.energy.gov/sites/prod/files/2019/02/f59/uesc_performance_assurance_planning.pdf



Task Order Language

Develop task order (T.O.) language to

- Effectively describe performance plan requirements and deliverables
- Ensure plan is actionable, achievable, and inclusive of all requirements
- Ensure ECM designs include operating strategy, performance metrics, and accurate baseline

Task Order Language, Continued

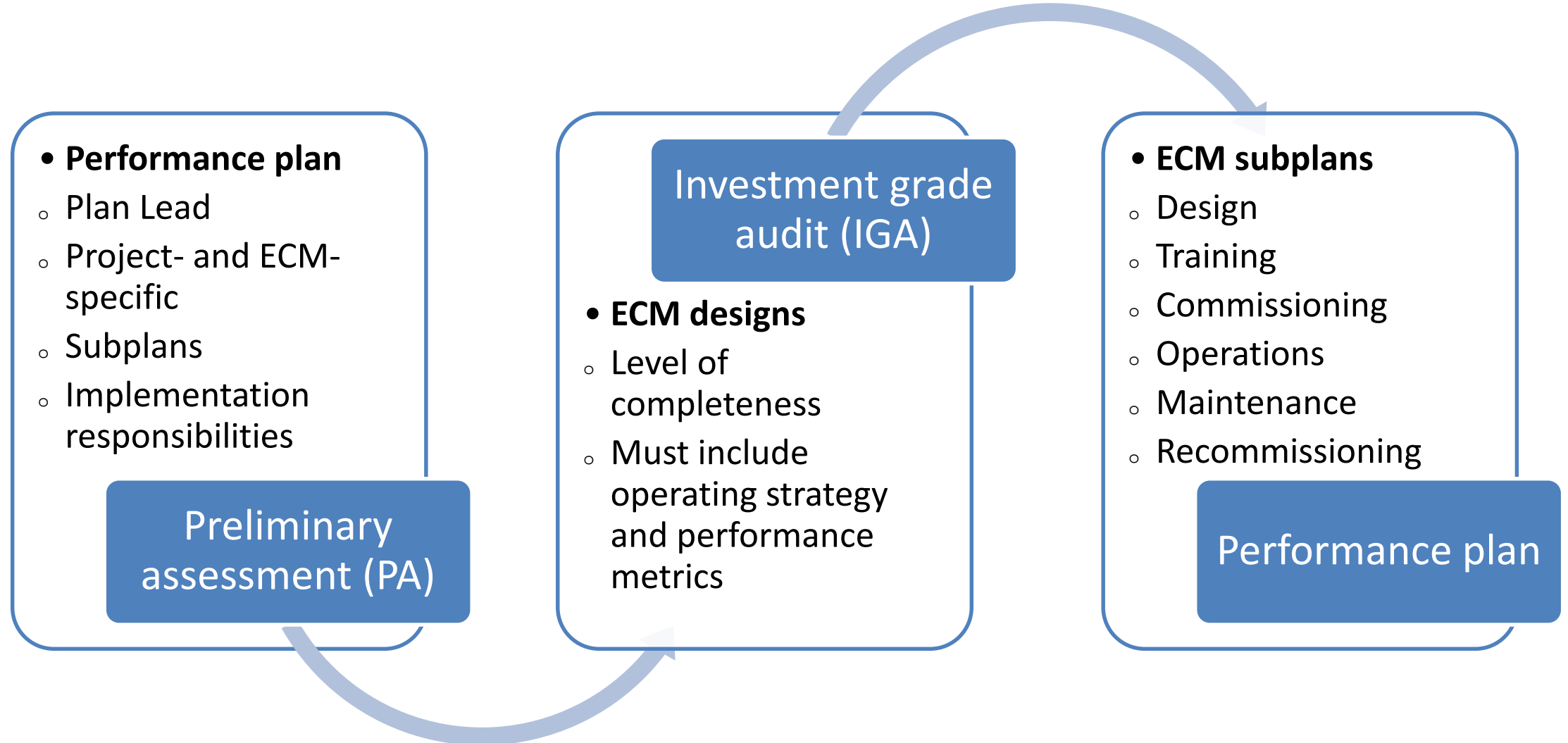
- Require the performance of each ECM be “measured, verified, tuned, and documented” through commissioning
- Require comprehensive and performance-driven training
 - Require ECM-specific training to be comprehensive and detailed based on the complexity of the ECM
 - Require O&M manuals, Cx and rCx protocol, worksheets, report template, with ECM-details

Task Order Language, Continued

Performance plan implementation in two parts:

- Part 1: Project development
 - Preliminary assessment through project acceptance
 - Agency responsibilities
 - Utility responsibilities
- Part 2: Assuring performance
 - Project acceptance through the performance period
 - Agency responsibilities
 - Utility responsibilities

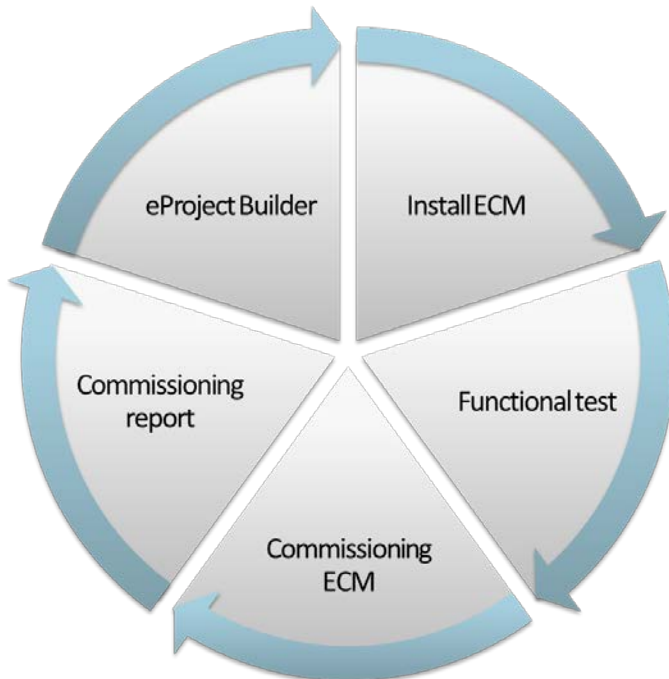
Performance-Focused Task Order (T.O.)



Implement the Performance Plan – Part 1

Agency

- Ensure installation, comprehensive training, and Cx meet T.O. requirements



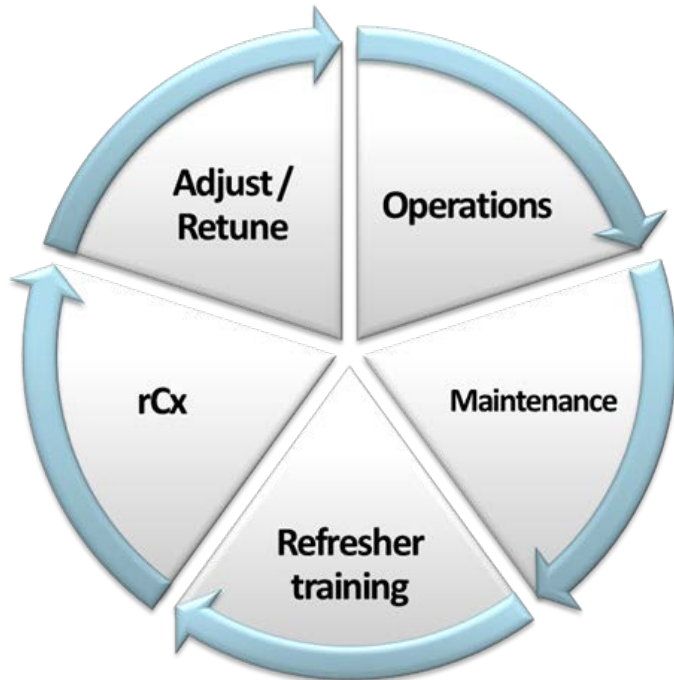
Utility

- Install each ECM
- Provide comprehensive performance-driven training
- Prove performance of each ECM through Cx
- Document results in Cx report and ePB

Implement the Performance Plan – Part 2

Agency

- Agencies are responsible for operating, maintaining, and assuring ECM performance



Utility

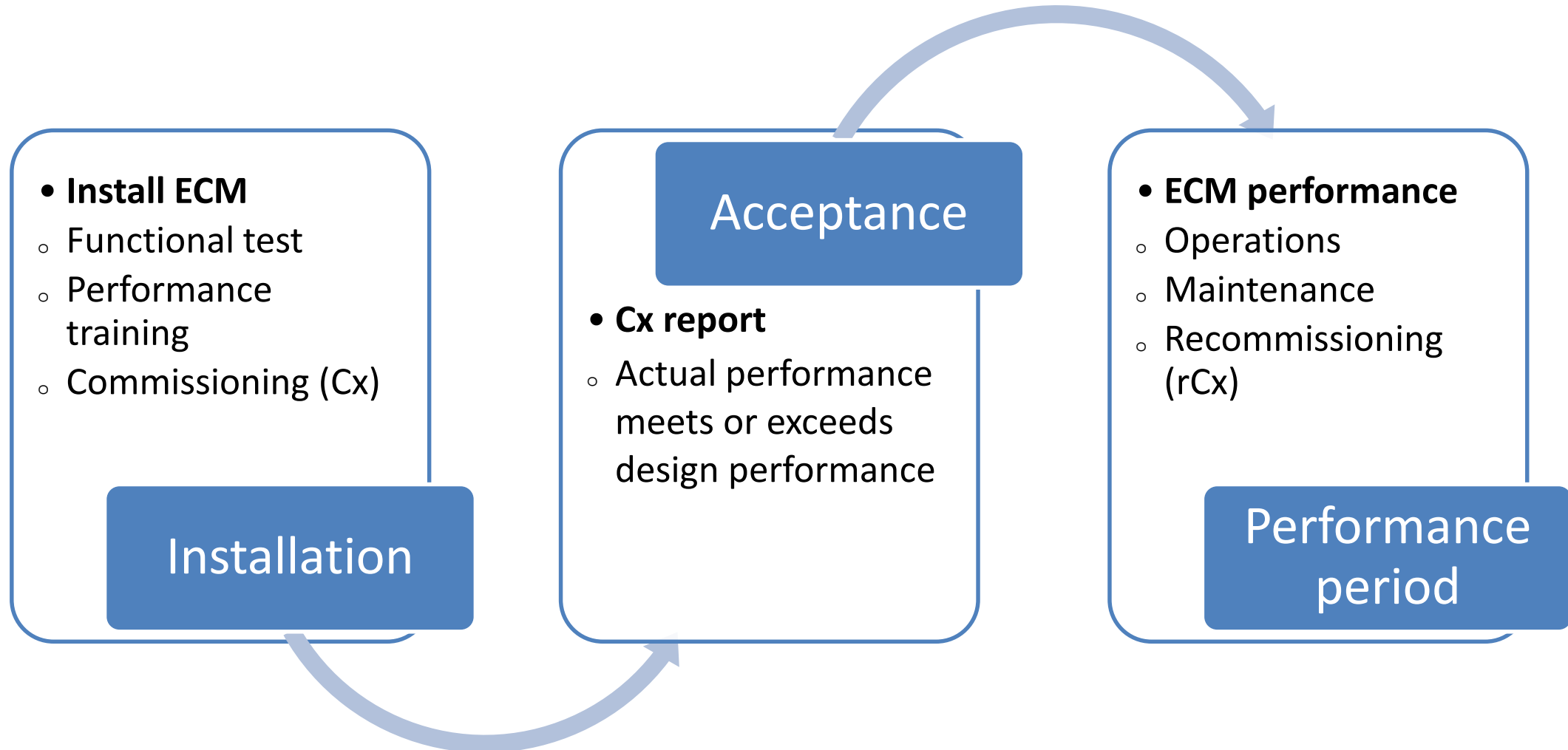
- As agreed to and stated in the T.O., provide the following during performance period:
 - Warranties
 - Performance services

Implement the Performance Plan – Options

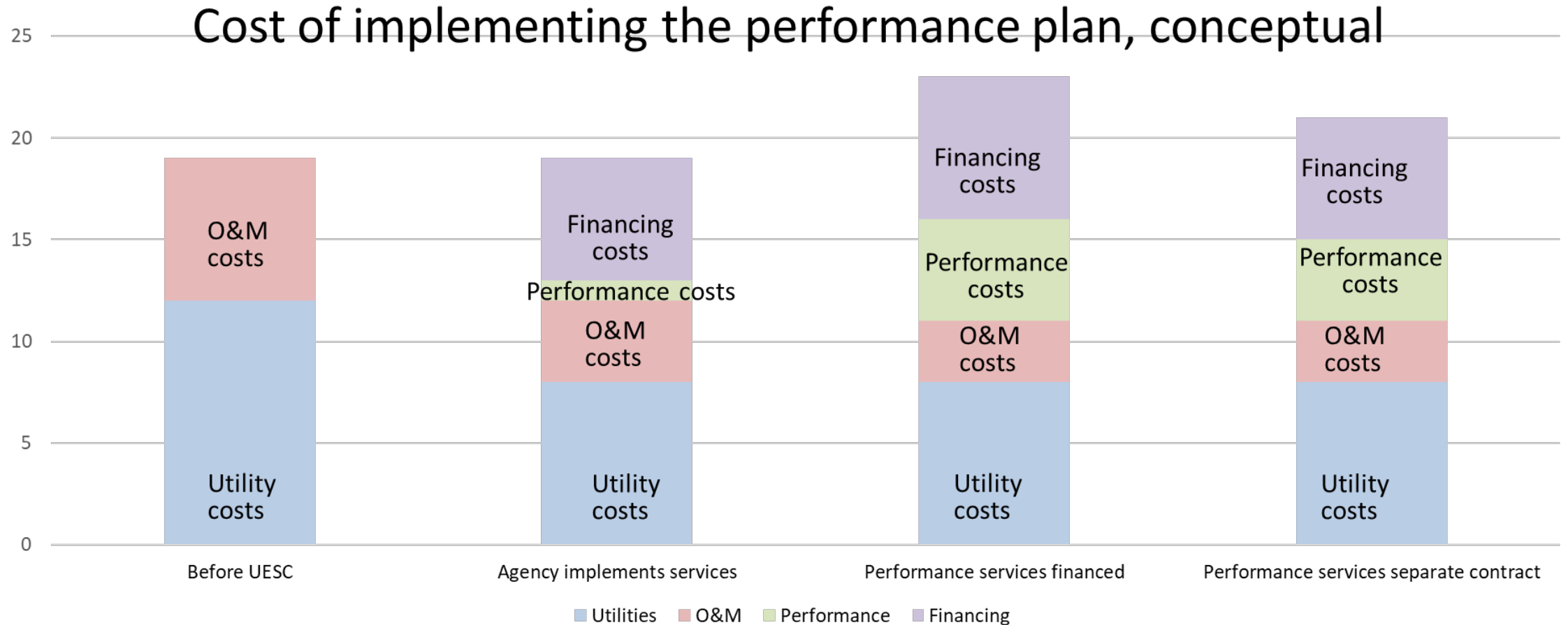
Agency options for implementing performance services:

- Agency – self-implement: the Agency implements performance period services
- Utility – include in the UESC T.O.: ECM-specific services as written in the T.O. for installation
- Services contractor – issue a separate services contract: select the ECMs, the services, and the duration of the contract

Assuring Performance



Invest in Performance



FEMP Resource: UESC Project Development Report Template

Agency and Utility teams use this resource to discuss, establish, and document the following:

- Project objectives, requirements, and deliverables
- Establish report format to improve comprehension and decision-process
- Reduce project development time

https://www.energy.gov/sites/prod/files/2019/02/f60/uesc_proj_dev_draft.docx



Report Template Application – PA

Preliminary assessment (PA)

- Discuss and clarify project scope
 - Sites, buildings, systems, equipment
 - Agree upon design completeness (15% - 25% is standard for PA)
 - Cost estimate
- Edit summary tables
 - Use notes to assist understanding (e.g., “will be provided in IGA”)
 - Agency to determine ECM priority ratings
 - ECM equipment life to inform decisions (e.g., obtain funding to meet top priority, long payback measures)

Report Template Application – IGA

Investment grade audit (IGA)

- Agency to select PA ECMs to be included in IGA
- Agree on design completeness (35%-85% is common for IGA)
- Pricing is based on competitive bids from ECM subcontractors
- Financing terms from 3 or more financiers
- Summary tables supported with detailed and open book information

Discussion: Performance Planning

What might we add or change to improve performance planning?

The performance planning subplan categories:

1. Design with baseline, operational strategy, performance metrics
2. Comprehensive performance-driven training
3. Commissioning (Cx)
4. Operations
5. Maintenance
6. Recommissioning (rCx)
7. Performance Period services as negotiated and stated in the T.O.

Discussion: Report Template

What might we add or change to improve decision support?

- Report format
- Technical scope
- Financially fair and reasonable

Thank You

Deb Vasquez

FEMP UESC Team, SME

National Renewable Energy Laboratory

deb.vasquez@nrel.gov