RULE 21
INTERCONNECTION PROGRAM EVALUATION

WORKSHOP 1

JUNE 27, 2019
WORKSHOP AGENDA

- Introduction and Overview – Laura Manz (10 minutes)
- Safety and Emergency Information – Reese Rogers (5 minutes)
- Project and Scope Discussion – Sony Dhaliwal (30 minutes)
  - Rule 21 Interconnection Program Evaluation: Project Overview and Timeline
  - Workshop 1: Objective
  - Navigant Approach: Detailed scope
  - Project Organization
- Questionnaire – Sarah Bilbao (30 minutes)
- Break – 15 minutes
- Questions and Discussion – All (2 hours 15 minutes, includes a 15 minute break)
- Next Steps and Feedback – Sony Dhaliwal (15 minutes)
• In the event of an emergency, please proceed calmly out the exits.

• The evacuation site is the Garden Plaza area between Herbst Theater and the War Memorial Opera House Buildings, on Van Ness

• Exit the building at the Main Entrance at Van Ness and McAllister streets, cross McAllister Street, pass Herbst Theater and enter the plaza.
PROJECT AND SCOPE DISCUSSION
RULE 21 INTERCONNECTION PROGRAM EVALUATION

PROJECT OVERVIEW AND TIMELINE
To ensure continued success of the California’s Rule 21 process, California Public Utilities Commission (CPUC) is undertaking a comprehensive evaluation of utility administration of the Rule 21 tariff to provide data and insight into each utility’s administration of the Rule 21 tariff.

The objectives of this project are to:

a) Characterize utility compliance with statutory requirements, Commission-approved Rule 21 tariffs and timelines, and Commission decisions through a structured process

b) Benchmark utility interconnection business practices to understand the current state of Rule 21 implementation

c) Identify areas for improvement and propose policy or programmatic changes resulting from this evaluation
PROJECT APPROACH AND TASKS

Task 1: Project Initiation
Navigant and Commission Staff reach agreement on details of project approach, timeline, and objective.

Task 2: Final Research Plan
Develop a Final Research Plan based on the proposed research methods and Stakeholder feedback.

• Today’s Objective #1
  Public workshop to present the Research Plan to the Stakeholders and solicit feedback.

• Incorporate stakeholder guidance with agreement from the Commission. [Stakeholder comments due by COB Monday, July 8, 2019]

Task 3: Data Collection and Data Analysis
Collect Primary (IOU interviews & benchmarking) and Secondary (research) data and perform analysis.

Task 4: Final Report
Conduct a public workshop to discuss results and trends and finalize project Report incorporating Stakeholder feedback.

Task 5: Interconnection Reporting Website
Create webpage to present the information in an accessible format (e.g., using timelines, tables, charts, and graphs) and provide user training.
<table>
<thead>
<tr>
<th>Task</th>
<th>Task Name</th>
<th>Completion Date</th>
<th>Milestone</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1</td>
<td>Conduct Project Initiation Meeting</td>
<td>Friday, May 17, 2019</td>
<td>1</td>
</tr>
<tr>
<td>2.3</td>
<td>Public workshop 1: Proposed Research Plan</td>
<td>Thursday, June 27, 2019</td>
<td>2</td>
</tr>
<tr>
<td>2.4</td>
<td>Finalize Research Plan with the comments received</td>
<td>Friday, July 19, 2019</td>
<td>3</td>
</tr>
<tr>
<td>3.5</td>
<td>Review results of Data Collection and Analysis with CPUC staff</td>
<td>Wednesday, September 18, 2019</td>
<td>4</td>
</tr>
<tr>
<td>4.1</td>
<td>Develop draft report presentation</td>
<td>Friday, October 4, 2019</td>
<td>5</td>
</tr>
<tr>
<td>5.3</td>
<td>Publish Webpage</td>
<td>Friday, October 25, 2019</td>
<td>6</td>
</tr>
<tr>
<td>4.2</td>
<td>Public Workshop 2: Draft Report Results</td>
<td>Friday, December 6, 2019</td>
<td>7</td>
</tr>
<tr>
<td>5.5</td>
<td>Host Training</td>
<td>Tuesday, November 26, 2019</td>
<td>8</td>
</tr>
<tr>
<td>4.3</td>
<td>Develop final report</td>
<td>Friday, December 27, 2019</td>
<td>9</td>
</tr>
</tbody>
</table>
WORKSHOP 1
OBJECTIVES
WORKSHOP OBJECTIVES

• Provide overview of the Rule 21 Interconnection Program Evaluation Project, including, scope and schedule.
• Discuss Navigant’s approach and key milestones.
• Introduce project team members.
• Solicit Stakeholder feedback for the following:
  1. Primary data collection Questionnaire
  2. Interconnection Reporting website data and its format
DETAILED PROJECT SCOPE
TASK 2: DEVELOP FINAL RESEARCH PLAN

1. Confirm Objectives

2. Develop Data Collection and Management Plan
   - Identify the primary data collection group
   - Develop a template to communicate adhering to CPUC requirements

3. Hold a Public Workshop

4. Finalize Research Plan

Data Request
- Analysis plan to ensure data collected aligns with research needs and answers specific questions
- Confirmation of best interview channel (phone, ride along, on-site)
- Refinement and prioritization of target sample
- Interview guide development based on best practice templates
- Interviewer preparation and training

Pre-Fielding Preparation
- Scheduling onsite and/or phone meetings with agenda
- Pre-interview preparation (e.g., guide review, background research)
- Detailed note taking of the meetings
- Post-interview follow up

Fielding
- Summarizing the interview inputs consistently across the matrix for all utilities
- Analysis of the interview inputs and identifying gaps
- Complete the matrix with received inputs and develop recommendations
- Analysis tool training sessions for coding teams
- Analysis using appropriate tool (Excel, NVivo)
Step 1: Data Collection

Two methods of data collection are described below:

**Primary Data Collection**
*Definition: Data collected by a researcher from first-hand sources, using methods like surveys, interviews, or experiments.*
- Follow-up with participants by conducting phone or in-person meetings to fill any gaps in information provided by the survey participants.

**Secondary Data Collection**
*Definition: Data gathered from studies, surveys, or experiments that have been run by other people or for other research.*
- Data resources such as State filings and interconnection process documents posted by each utility.

Step 2: Data Sampling

- **Identify key market sectors and actors (IOU)s to target for data collection**
- Design outreach questionnaire according to Rule 21 interconnection application process.
- Conduct Secondary Data Collection research and develop responses to questionnaire for each IOU as first step and confirm the data with each IOU to maximize response rates.
- As needed, perform additional outreach in person or phone for consistent data collection and to collect approved data from all jurisdictions.

Step 3: Data Analysis

Conduct a thorough analysis of results, including development of analysis matrices, to align with objectives defined in Task 2:

1. **Calibrate the compliance of each California IOU with Rule 21 tariffs and timelines**
2. **Identify state regulations and practices adopted within each jurisdiction based on achievable RPS targets**
3. Compare the matrices developed for Objectives 1 and 2 to identify key differences and the methodologies or tools which will increase efficiency of the interconnection process
**Step 1: Develop Draft Report (Microsoft PowerPoint presentation)**

Develop a draft report describing the methodology and process for surveys and data collection and the results of surveys measuring the experiences and satisfaction of the applicants.

With a focus on reporting the study findings, the draft report will:
1. Provide a summary of key findings for each California IOU
2. Describe research methods and analysis
3. Provide a summary of data using graphs and other pictorial representations; and
4. Provide preliminary recommendations.

**Step 2: Hold Public Workshop**

- Present draft report and gather Stakeholder feedback.
- Update the draft report presentation with the final findings from the evaluation that provides
  1. A summary of key findings for each California IOU
  2. Describes research methods and analysis
  3. Provides a summary of data using graphs and other visualizations; and
  4. Provides preliminary recommendations

**Step 3: Develop Final Report (e.g. Microsoft Word document)**

Develop a final written report and an update to the draft presentation based on feedback from the Commission and the workshop participants that will include but not limited to the following sections:
1. Executive Summary
2. Background/Introduction
3. Research Methods
4. Analysis, Results, and Discussion
5. Recommendations
6. Appendices
TASK 5: INTERCONNECTION REPORTING

1. Create a process, reviewed and approved by Commission Staff, to collect, publish, and present information on each IOU’s interconnection program.
2. Solicit feedback from workshop participants regarding the interconnection information that needs to be collected and its format.
3. Develop a reporting proposal containing data to be reported and the criteria used to identify what information to report.
4. Solicit written feedback on the reporting proposal from stakeholders to the interconnection proceeding (R.17-07-007) and work with CPUC Energy Division and each IOU to gather the appropriate information.
5. Create a webpage to present the information in an accessible format (e.g., using timelines, tables, charts, and graphs).
6. Identify technical requirements for transferring information between business systems while maintaining data integrity.
7. Identify potential challenges and barriers, and make recommendations for establishing an efficient, robust, and cost-effective business process.
8. Issue a proposal to CPUC Energy Division for the website, modeling to include critical elements of California’s DG Statistics and Massachusetts’ Interconnection Activity webpages.
9. Publish the webpage with all the CPUC-directed changes and approval from CPUC Energy Division.
10. Provide training to the CPUC Energy Division and IOU staff on maintaining data integrity and publishing information to the webpage. The training will follow a three step approach:

   General Approach to In-Person Training
   - Step 1: Identify User Needs
   - Step 2: Develop Materials
   - Step 3: Conduct Training

   Today’s Objective #2
EXAMPLE: DG STATISTICS

Source: https://www.californiadgstats.ca.gov/
EXAMPLE: MASSACHUSETTS INTERCONNECTION ACTIVITY WEBPAGES

Source: https://sites.google.com/site/massdgic/home/interconnection
QUESTIONNAIRE FOR PRIMARY DATA COLLECTION
The questions are intentionally categorized to encourage transparent discussion surrounding best practices, utility performance, and unforeseen barriers within interconnection processes.

**Objective 1: Rule 21 Compliance**

- **Timelines**
  - Interconnection track overviews
  - Delays within interconnection tracks and how those occur
  - Frequent missed milestones on the utility or Interconnecting Customer side

- **Cost Responsibility and Tracking**
  - Cost responsibility for system upgrades
  - Planned versus unplanned
  - Drivers for projects coming over cost envelope

**Objective 2: Benchmarking**

- **Expected and Actual Timelines**
  - Utility timelines based upon Fast Track and Detailed Studies
  - Benchmark for design, construction, and commissioning timelines

- **Utility and Project Cost (Estimated and Actual)**
  - Cost breakdown (utility and customer)
  - Project cost margins and unanticipated upgrade comparison

- **Customer Service and Communication**
  - Response times and inquiry service between the utility, Interconnecting Customer, and developers

- **Coordination between Departments / Offices**
  - Point of contacts and queued project responsibilities
  - Service territory and decentralized office impact to coordination

- **Recordkeeping**
  - Handling customer information
  - Interconnection data utilization to mitigate issues

- **Workload Planning**
  - Budgets allocated to administration and staff
  - Resource planning for potential interconnection growth
PRELIMINARY LIST OF BENCHMARKING UTILITIES

<table>
<thead>
<tr>
<th>Capability Area</th>
<th>HECO (HI)</th>
<th>National Grid (MA)</th>
<th>Xcel Energy (CO)</th>
<th>ConEdison (NY)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Application Processing timeline</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Study Processing Timeline</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Customer Costs</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Customer Service / Communication</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coordination between Departments</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recordkeeping</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Workload Planning</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Customer Satisfaction Survey</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Benchmark States

HECO (HI) - National Grid (MA) - Xcel Energy (CO) - ConEdison (NY)
QUESTIONS AND DISCUSSION
NEXT STEPS AND FEEDBACK
NEXT STEPS

• Stakeholder comments on the Questionnaire and feedback on the Workshop 1 are due by COB Monday, July 8, 2019.

• Stakeholder feedback regarding the interconnection information that needs to be collected and its format for website due by COB Friday, July 19, 2019.

• Navigant will review the comments and feedback and update the Research Plan and Questionnaire as per approval from the Commission by COB Friday, July 19, 2019.

• Navigant will reach out to California IOU representatives to schedule in-person or phone interviews.
<table>
<thead>
<tr>
<th>Topic</th>
<th>Stakeholder</th>
<th>Comments</th>
<th>Proposals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
NAVIGANT CONTACTS

LAURA MANZ
Director
858.354.8333
Laura.Manz@Navigant.com

SONY DHALIWAL
Associate Director
512.493.5401
Sukhjit.dhaliwal@Navigant.com

RADHA SOORYA
Associate Director
317.417.7542
Radha.Soorya@Navigant.com

SARAH BILBAO
Senior Consultant
916.631.3281
Sarah.bilbao@Navigant.com

JOSHUA REGO
Managing Consultant
415.356.7103
Joshua.rego@Navigant.com

SAGAR DEO
Senior Consultant
312.683.5804
Sagar.deo@Navigant.com