




HIGHLIGHTS OF NON-ENERGY IMPACTS RESEARCH PLAN

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An Exelon Company

NAVIGANT



TIMELINE FOR NON- ENERGY IMPACTS RESEARCH AND RESULTS

PART 1 TIMELINE FOR NAVIGANT'S NEI RESEARCH AND RESULTS (PART 2 TIMELINE IS TBD)

| Task | Activity | 2018 | | | | | 2019 | | | | | 2020 | | |
|------|---|------|---|---|---|---|------|---|---|---|---|------|---|---|
| | | S | O | N | D | J | F | M | A | M | J | J | A | S |
| 1 | Quantify and Monetize Income Eligible Participant / Societal NEIs | | | | | | | | | | | | | |
| | Quantify and Monetize Income Eligible Utility NEIs | | | | | | | | | | | | | |
| 2 | Screening Questions for Non-Income Eligible Programs | | | | | | | | | | | | | |
| 3 | Quantify and Monetize Economic NEIs | | | | | | | | | | | | | |

- **Part 1, Task 1:**

- Navigant plans to conduct SF + MF participant surveys in the fall of 2018 and 2019
 - Winter of 2018 may provide early insights from surveys
 - Quantified and monetized NEIs ready for TRM/TRC in 2020
 - Quantified and monetized Income Eligible Utility NEIs ready for TRM/TRC in 2019

- **Part 1, Task 2:**

- Screening Questions for Non-Income Eligible Programs' potential NEIs

- **Part 1, Task 3:**

- Quantify and Monetize Economic NEIs ready for TRM/TRC in 2019

- **Part 2: TBD**

- Based on survey responses, Navigant will recommend and conduct research to quantify and monetize NEIs in non-IE programs



JOB IMPACTS

ECONOMIC IMPACT ANALYSIS - OVERVIEW

- Economic impact studies are designed to estimate the economic benefits to a region from new activity.
- Economic impact models leverage a delineation of payments between firms, households, and governments within a regional economy.

Categories of Impacts:

- Employment (jobs)
- Labor Income (\$)
- Value of Industry Output (\$)

Types of Impacts:

- Direct
- Indirect
- Induced

ECONOMIC IMPACT ANALYSIS - APPROACH

- The most commonly used economic impact analysis model is IMPLAN.
- IMPLAN provides a baseline model of state/regional economies. The selected geography will be tailored to align with the ComEd service territory.
- Economic impacts of the ComEd portfolio will be derived from the IMPLAN model

Inputs:

- Annual number of jobs and salary for ComEd employees managing/implementing the portfolio of programs
- Annual payments to implementation contractors
- Annual incentive/rebate payments to customers
- Annual energy/bill savings (portfolio-level, program-level, zip code/county-level, etc.) and the expected duration of energy savings

ECONOMIC IMPACT ANALYSIS - DELIVERABLES

- **Overall economic impacts of ComEd program portfolio (Direct, Indirect, and Induced)**
 - Employment (jobs)
 - Labor Income (\$)
 - Value of Industry Output (\$)
- **Economic impacts by industry**
- **Economic impacts of bill savings by program**
 - Employment (jobs)
 - Labor Income (\$)
 - Value of Industry Output (\$)



COMEd NON- ENERGY IMPACTS RESEARCH PLAN

NAVIGANT'S PHASED RESEARCH APPROACH

- Part 1 and Part 2 research activities based on the Stipulation and Future Energy Jobs Act (FEJA) legislation. In CY2018 and CY2019:
 - Navigant will conduct Part 1 research quantifying NEIs for ComEd's residential income eligible (IE) programs and screen for evidence of NEIs in ComEd's non-IE programs.
 - After reviewing the responses to the screening questions, Navigant will develop a Part 2 research plan which will describe the primary research and qualifying NEIs starting in CY2019 and continuing in CY2020 and CY2021.
 - We will conduct additional primary research on programs where screening questions and secondary research show promise of enabling estimates of NEIs to be developed and Navigant will revise the annual research plan accordingly.

KEY RESEARCH OBJECTIVES

- ***Overall Research Goals***
- This NEI research is distinct from annual program evaluation activities since NEIs are currently not quantified nor monetized as part of evaluation activities.
- The key objectives of this research are to:
- **Quantify NEIs as a proposed update to the IL TRM**
 - Calculate NEIs at the program level, first for IE programs and followed by other programs as determined by ComEd and Navigant and stakeholders
- **Monetize NEIs as a proposed update to the IL TRM**
 - Calculate dollar savings per NEI for inclusion in TRC calculations

KEY RESEARCH QUESTIONS

- Which programs are likely to have quantifiable NEIs?
- What is the best way to quantify the NEI (i.e., at the measure, program, sector, or portfolio level)?
- Is primary research required to quantify the NEI?

PROPOSED METHODOLOGY

- **IE Surveys:** Navigant will develop survey instruments and field surveys for single-family (SF) and multi-family(MF) program participants and MF building owners to quantify and monetize NEIs.
- **Quasi-experimental method:** Navigant will quantify utility NEIs from ComEd's IE programs.
- **Economic Modeling:** Quantify energy efficiency-related job creation at the portfolio level and quantify utility NEIs from IE energy efficiency programs.
- **Continue Secondary Research:** Conduct ongoing research into how other firms and utilities are quantifying NEIs.
- **Screening Questions:** Add questions, as appropriate, to existing surveys to gauge possible existence of program-related NEIs.
- **Draft IL TRM Workpapers:** Document NEI quantification and monetization methodology for inclusion in the IL TRM.

SUMMARY OF COMMENTS RECEIVED ON DRAFT REPORT “QUANTIFYING NON-ENERGY BENEFITS FROM COMED’S INCOME ELIGIBLE PROGRAMS”

- Navigant received **33** comments on the draft report “Quantifying Non-Energy Benefits from ComEd’s Income Eligible Programs” submitted for review*

Added to Research Plan

- MF Building Owner Impacts
- Missed school days / increased productivity at school
- Reduced need for heating assistance
- Reductions in vacancy

Comments for SAG Discussion

- Researching longer term health impacts (e.g., cancer, cardiovascular diseases, lead exposure)
- Reductions in O&M costs
- Property value impacts
- IE specific Environmental and Economic NEI Research
- Do “comfort” NEIs fall under the “quantifiable societal benefit” language in the IL TRC test?
- Defining the parameters/features to quantify NEIs at the program level
- Intent to incorporate into the TRM for future application to cost-effectiveness analysis?

SUMMARY OF COMMENTS RECEIVED ON THE “COMEd NON-ENERGY IMPACTS RESEARCH DETAILED PLAN - PART 1”

- Navigant received **12** comments on the **ComEd Non-Energy Impacts Research Detailed Plan - Part 1** submitted for review*
 - **Are both positive and negative NEIs being investigated?** Yes
 - **How are you quantifying indirect impacts?** Indirect impacts refer to secondary impacts generated from business to business spending as firms involved in the initial economic catalyst (ComEd programs – employment and spending) increase purchases from their suppliers who must in turn increase purchases from their suppliers and so forth as the initial expenditure ripples through interconnected industries. Induced impacts refer to secondary impacts generated from household to business spending as labor income gains from both direct and indirect activity pass through local consumption markets.
 - The direct impacts will be based on data collected from ComEd about the implementation/administration of the portfolio of programs. The indirect and induced economic impacts will be calculated using IMPLAN.
 - **How will you estimate bill savings?** Direct impact to household income and will come from the energy impact analysis of the portfolio. This will be included in the overall direct impact of the portfolio. Bill savings will also be included as a direct impact decreasing utility revenue – which will have a contractionary economic impact.



OPEN DISCUSSION

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