April 5, 2016

MEMORANDUM

TO: **Council Members**

FROM: **Charles Grist, Kevin Smit, and Massoud Jourabchi**

SUBJECT: **Proposal for FY 2016 work on industrial load and efficiency assessments**

BACKGROUND:

Presenter: Charles Grist, Kevin Smit

Summary: Staff proposes issuing a Request for Proposals (RFP) for energy load and efficiency research on the industrial sector in the Pacific Northwest. The research will be used to improve annual load forecasting and to update baseline data for the Eighth Power Plan energy efficiency assessment.

Nineteen industrial segments (including pulp, paper, frozen food, lumber, refinery, cold storage, etc.) make up the majority of the Northwest industrial sector in the Seventh Power Plan. The proposed RFP would seek updated information on four components of each of the nineteen industry segments included in the Seventh Plan: 1) Industry description and detailed definition 2) estimate of total annual energy use, 3) disaggregated electric end-use, i.e. lighting, motors, and 4) energy efficiency and demand response information. The proposed RFP would seek out experts to conduct the research and provide the most recent data for each industrial segment.

The proposed schedule is to release the RFP by April 15, make a recommendation to the Council and have the Council select the winning

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bid(s) at the May 2016 Council Meeting, enter into a contract(s), and start work as soon after the May Council meeting as possible . The work is to be completed by the end of fiscal year (September 31, 2016). Depending on the proposals received, the Council may choose to divide up the work between several contractors who have expertise in various segments of the industrial sector. The total amount of the combined contract(s) is not anticipated to exceed $100,000.

Relevance: This new industry-specific assessments will provide important data for near-term load forecasting needs and will serve as the foundation for an updated Eighth Power Plan conservation assessment.

Workplan: C.1.1 Conservation Resources – Data development to enhance or improve estimates for conservation supply curves (8^{th} Plan).
C.3.1 Forecasting and Economic Analysis – Improve Industrial Sales Data.

Background: The last fully updated Industrial energy efficiency assessment was completed in preparation of the Sixth Power Plan. For the Seventh Plan, staff relied on results from the Industrial Facility Site Assessment (IFSA) and numerous other sources to update and refresh the Sixth Plan industrial assessment. The load forecast also relies on the data from this industrial assessment. A variety of metrics and sources (e.g., employment data) are used to develop the end-use level load forecast for each industrial segment.

Industrial Load and Efficiency Assessments: RFP for 2016 Work

April 12, 2016

Northwest Power and Conservation Council

Objective and Scope

- Staff proposes issuing RFP for energy load and efficiency research on the Industrial sector in the Pacific Northwest
- Expected results:
  - improved annual load forecasting
  - updated baseline data for the Eighth Power Plan EE assessment
- Work scope - four components for each industry segment:
  1) industry description and detailed definition
  2) estimate of total annual energy use in the PNW
  3) electric end-use shares, i.e. lighting, motors
  4) energy efficiency and demand response information

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Industrial Segments

7P EE Industry Segments	NAICS CODE	2035 Forecasted Load (MWh)	2035 Conservation Potential (aMW)
Mechanical Pulp	322	4,261,225	104
Kraft Pulp	322	2,596,442	69
Paper	322	5,267,664	139
Foundries	331	673,247	3
Frozen Food	31141	1,243,766	29
Other Food	311	3,189,467	71
Wood - Lumber	3211	620,280	7
Wood - Panel	3212	718,938	13
Wood - Other	3212	1,525,349	38
Sugar	3113	582,684	11
Hi Tech - Chip Fab	3344	999,801	15
Hi Tech - Silicon	32518	347,399	1
Metal Fab	332	668,274	2
Transportation, Equip	336	1,697,223	9
Refinery	324	1,143,256	32
Cold Storage	49312	1,129,112	13
Fruit Storage	49313	3,380,049	66
Chemical	325	4,496,577	33
Water and Wastewater (Municipal)			47

Approach

- The approach is to find experts in each industry to conduct the research and obtain data for each industrial segment
  - Industry experts should have in-house knowledge and quick access to key resources
  - Hope to complete 5-8 industrial segments in 2016
  - Possible additional research in the 2017-2019 timeframes

Timeline and Budget

- Proposal schedule
  - Proposal Release: April 15, 2016
  - Proposals Due: April 29, 2016
  - Council selects winning bid(s) and authorizes staff to enter into contract(s) for work at May meeting
- Work Schedule
  - Work begins: May 31, 2016
  - Final Report and Spreadsheet: September 16, 2016
  - Final Invoice Due: September 30, 2016
- Budget: Up to $100K for 2016 efforts
  - May include several contracts

Questions?