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SFPUC CC: Ed Harrington

From: Samuel Golding, Local Power Inc., Project Manager

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RE: CS-920R-B, Task 3, Interview Report

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## Summary

As discussed in our January Monthly Report, due to both the holiday season and the San Francisco Government staff furlough, we were not able to schedule and conduct as many interviews as hoped during this period. Consequently we were also unable to complete the Subtask E: Regulatory and Policy Analysis initially due by this date. This matter has been discussed with SFPUC staff ahead of time.

This report summarizes preparations to date, identifies the interviews we have conducted, and briefly discusses the approaches we have used to develop interview questions for each subtask's subject matter. As in many cases, the subject matter covered in an interview will span more than one Task Area, we have provided a brief summary of the major subject matter items covered in each interview, we will submit the detailed interview notes as a separate document once we have completed the interviews.

## Task A: Wholesale Procurement

### *Interview Preparations*

For Task A, we have identified a set of factors to cover in interviews that will be relevant in evaluating how the renewable generation roll-out and demand reduction and management technology installations could best be integrated with ongoing conventional power procurement. We have identified a preliminary count of up to 40 interviews that may include questions pertinent to wholesale procurement. Subject matter areas of interest include: the nature of technology outputs, load management practices, the functions of current load management technologies, and the time scales involved in deployment.

### *Interviews Conducted*

B. Hale – SFPUC, AGM Power. Subject matter areas covered included: current status and history of the SENA contract, CleanPowerSF expectations, implementation strategy and possible timelines.

C. Velasquez – CPUC, Energy Division. Subject matter areas covered included: CCA regulations, opt-out rules, regulatory update, questions to be referred to the legal division, changes caused by SB790,

M. Campbell – SFPUC, CCA Program Manager. Subject matter areas covered included: current status and history of the SENA contract, contract definitions, phase-in strategy, substitution language, defining target customers, role of Noble Energy,

S. Kiliccote, M. Piette – Lawrence Berkeley National Laboratory. Subject matter areas covered included: current status of OpenADR in ancillary services markets, results from IRR and OpenADR Integration pilot.

T. Rydstrom – SFPUC, CFO. Subject matter areas covered included: financial plan and expectations, CleanPowerSF, credit rating concerns, expected bonding capacity, CAFR.

## **Task B: Data Analysis**

### *Interview Preparations*

For Task B, we have identified a set of factors to cover in interviews that relate to the portfolio development and siting aspects of this Task. We have identified a preliminary count of 130 interviews that may cover various subjects where specific data and information is needed to support the completion of the work under this task. Subject matter areas of interest include: current technology offerings, technology interface and integration factors, performance outputs, the nature of the supplier market as to product development and evolution, competitiveness and production capacity, and the time scales involved in deployment.

### *Interviews Conducted*

A. Kelly – San Francisco Department of the Environment, Energy Efficiency Programs Manager. Subject matter areas covered included: energy efficiency program, Energy Watch, funding issues, utility relations, SFDOE data, in city development of demand side measures, data availability and analysis.

B. Hale, M. Campbell – SFPUC, AGM Power and CCA Program Manager. Subject matter areas covered included: description and availability of SFPUC data, CCA info tariff, completeness thereof, existing SFPUC analysis of load data.

B. Karimi – San Francisco Department of Emergency Management, Emergency Services Manager. Subject matter areas covered included: description and location of emergency facilities.

B. Polagye – University of Washington, Professor. Subject matter areas covered included: 2009 program report, EPRI study, tidal power development in Europe and the United States, leading developers, ideal conditions for tidal development.

C. Broomhead – San Francisco Department of the Environment, Municipal Climate Action Plan Coordinator. Subject matter areas covered included: existing SFDOE programs, financing renewables and

efficiency measures, SFDOE data, in city development of demand side measures, data availability and analysis.

C. Kavalec – California Energy Commission, Forecaster. Subject matter areas covered included: load shape analysis, demand forecasting.

D. Kern – San Francisco Department of Recreation and Parks, Director of Operations. Subject matter areas covered included: development on City owned property, past development barriers, park tenants and facilities, current efficiency and renewables efforts.

D. Murray – San Francisco Department of the Environment, Renewables Program Manager. Subject matter areas covered included: siting renewables in San Francisco, development strategies, existing SFDOE partnerships with public and private institutions, financing renewables.

D. Sider – San Francisco Planning Department, Ombudsman to the Director, Assistant to the Zoning Administrator. Subject matter areas covered included: permitting and zoning within San Francisco, zoning changes since 2009, development process and barriers, review and appeals process.

J. Jackson – MAISY, Principal. Subject matter areas covered included: utility data analysis, load shape analysis from a development perspective, demand side analysis of residential, commercial and industrial loads.

J. Johnson – San Francisco Department of Technology, Analyst. Subject matter areas covered included: SFGIS, structure and available data, data management and access to 200+ databases.

K. Lyons – San Francisco Sheriff Department, Facilities Manager. Subject matter areas covered included: backup power opportunities for critical facilities and communication networks.

K. Thompson – San Francisco Department of Technology, Analyst. Subject matter areas covered included: SFGIS, structure and available data, data management and access to 200+ databases.

M. Bhat – San Francisco Port Authority, Utilities Manager. Subject matter areas covered included: Port tenant locations and description, prior analysis of renewable energy (wind, solar, and heat exchangers).

M. Borak – CPUC, Energy Division, Permitting Analyst. Subject matter areas covered included: process of obtaining permits from the CPUC, CEQA for renewables, common barriers to development, streamlining permitting.

M. Campbell – SFPUC, CCA Program Manager. Subject matter areas covered included: description and availability of SFPUC data, CCA info tariff, completeness thereof, existing SFPUC analysis of load data.

S. Kiliccote, M. Piette – Lawrence Berkeley National Laboratory. Subject matter areas covered included: overview of LBL's expertise, site selection criteria, load analysis, DR strategies.

T. Vincent – NRG, Engineer. Subject matter areas covered included: NRG thermal plant in San Francisco, CHP development within the City, barriers to interconnection of generation and end users, current strategies toward development.

W. Waite – Department of Housing and Urban Development, Energy Manager. Subject matter areas covered included: data available on multi-family housing stock in San Francisco, prior experience with RE/EE developers.

## Task C: Financial Analysis

### *Interview Preparations*

For Task C, we have identified a set of factors to address in interviews that will be relevant in considering the financing and funding factors that would apply to technologies sourced through the RFPs. We have identified 59 interviews that may cover factors relevant to the program financial model and financing. Subject matter areas of interest include: capital and deployment cost factors, operations cost factors, factors applicable to revenue bond structuring, and ownership and governance alternatives.

### *Interviews Conducted*

B. Hale – SFPUC, AGM Power. Subject matter areas covered included: financial constraints, product offering design, market research.

C. Broomhead – San Francisco Department of the Environment, Municipal Climate Action Plan Coordinator. Subject matter areas covered included: PGC funds, existing financing of efficiency measures in City, barriers to investment, difficulty in implementation, future of financing for efficiency projects.

C. Solich – California Department of the Treasury, Deputy Secretary. Subject matter areas covered included: federally back renewables energy bonds, existing climate for municipal debt in California.

D. Murray – San Francisco Department of the Environment, Renewable Energy Program Manager. Subject matter areas covered included: financing in City distributed generation, historical and current investment market for renewables, vendors, developers.

M. Campbell – SFPUC, CCA Program Manager. Subject matter areas covered included: program design and implementation, market research.

S. Kiliccotte, M. Piette – Lawrence Berkeley National Laboratory. Subject matter areas covered included: extant program design and incentives, insights into market structure.

T. Rydstrom – SFPUC, CFO. Subject matter areas covered included: SFPUC energy credit rating process, state and federal programs applicable to the CCA.

T. Vincent – NRG, Engineer. Subject matter areas covered included: Financing improvements to the NRG thermal plant and distribution system, Power Procurement Agreements.

## Task D: Risk Review

### *Interview Preparations*

For Task D, we have identified a set of factors to address in interviews that will be relevant in considering the program risk factors. We have identified 96 interviews that may cover factors relevant to the program risk. Subject matter areas of interest include: technology sourcing and deployment risks, functionality, durability and performance risks, technology integration risks, site ownership and access issues, and regulatory process risks.

### *Interviews Conducted*

A. Kelly – San Francisco Department of the Environment, Energy Efficiency Programs Manager. Subject matter areas covered included: maintaining project funding, optimizing program design.

B. Hale – SFPUC, AGM Power. Subject matter areas covered included: CleanPowerSF and power contract timelines, anticipated opt-out rate, barriers to implementation, policy direction.

B. Polagye – University of Washington, Professor. Subject matter areas covered included: risk factors for tidal power development in Europe and the United States, characterizing leading developers, ideal conditions for tidal development.

C. Broomhead – San Francisco Department of the Environment, Municipal Climate Action Plan Coordinator. Subject matter areas covered included: barriers to efficiency measure adoption, lighting retrofit barriers.

D. Murray – San Francisco Department of the Environment, Renewables Program Manager. Subject matter areas covered included: partnership risks, Power Procurement Agreements, third party developers, interconnection issues, financing renewables.

D. Sider – San Francisco Planning Department, Ombudsman to the Director, Assistant to the Zoning Administrator. Subject matter areas covered included: timelines for permitting, review and appeals process, effect of new zoning and planning statutes.

M. Borak – CPUC, Energy Division, Permitting Analyst. Subject matter areas covered included: process of obtaining permits from the CPUC, CEQA and NEPA timelines and characteristics, common barriers to development, streamlining permitting.

M. Campbell – SFPUC, CCA Program Manager. Subject matter areas covered included: Phase-in strategy and substitution clause language, previous SFPUC market research.

M. Leao – California Energy Commission, Smart Appliances. Subject matter areas covered included: process of creating efficiency standards, state of the market for smart appliances.

S. Kiliccote, M. Piette – Lawrence Berkeley National Laboratory. Subject matter areas covered included: state market readiness, competition, alternative technical standards and versions therein, technological integration, appliance manufacturer offerings, outreach to manufacturers and vendors.

T. Rydstrom – SFPUC, CFO. Subject matter areas covered included: program financial planning and factors relevant to revenue bond issue from the market risk perspectives, SFPUC energy credit rating process, state and federal programs applicable to the CCA.

T. Vincent – NRG, Engineer. Subject matter areas covered included: NRG thermal plant in San Francisco, CHP development within the City, barriers to interconnection of generation and end users, current strategies toward cogen development.

## **Task E: Regulatory and Policy Review**

### *Interview Preparations*

For Task E, we have identified a set of factors to address in interviews relating to the regulatory process. We have identified 94 interviews that may cover regulatory factors applicable to the program. Subject matter areas of interest include: regulations that would be applicable to each specific technology deployment, the regulatory approval process for each, and regulatory and other programs that may provide direct or indirect benefits applicable to the deployment or operations elements of the program.

### *Interviews Conducted*

A. Kelly – San Francisco Department of the Environment, Energy Efficiency Programs Manager. Subject matter areas covered included: potential replacements for PGC funding.

B. Hale – SFPUC, AGM Power. Subject matter areas covered included: relationship between Enterprises, regulatory constraints on CCA service and product offering.

B. Polagye – University of Washington, Professor. Subject matter areas covered included: the complications of siting tidal power due to multiple, uncertain jurisdictions.

C. Broomhead – San Francisco Department of the Environment, Municipal Climate Action Plan Coordinator. Subject matter areas covered included: PGC funding, CPUC rulings pertaining to the funding of efficiency programs, strategies to maximize market penetration.

C. Velasquez – CPUC, Energy Division. Subject matter areas covered included: changes to the regulations for Community Choice Aggregators, impacts of SB790, cost recovery mechanisms, positive and adverse regulatory developments for CCA.

D. Murray – San Francisco Department of the Environment, Renewables Program Manager. Subject matter areas covered included: limits to the scope of renewables development within San Francisco.

D. Sider – San Francisco Planning Department, Ombudsman to the Director, Assistant to the Zoning Administrator. Subject matter areas covered included: permitting and zoning within San Francisco, zoning changes since 2009, development process and barriers, review and appeals process.

M. Borak – CPUC, Energy Division, Permitting Analyst. Subject matter areas covered included: process of obtaining permits from the CPUC, CEQA for renewables, common barriers to development, streamlining permitting.

M. Campbell – SFPUC, CCA Program Manager. Subject matter areas covered included: regulatory constraints for CleanPowerSF, observation of policy direction in the City, SFPUC structure.

M. Downey – The Cape Light Compact, Director. Subject matter areas covered included: development risks for public agencies, state of the developer market, development strategies for renewables and efficiency measures, relationship to private parties.

S. Kiliccote, M. Piette – Lawrence Berkeley National Laboratory. Subject matter areas covered included: current status of OpenADR in CAISO ancillary services markets, results from IRR and OpenADR Integration pilot, implications for tariff designs, AB1X restrictions, update on national standards process.

T. Vincent – NRG, Engineer. Subject matter areas covered included: barriers to interconnection of generation and end users, current strategies toward development.