Marin Energy Authority  
Technical Committee Meeting  
Monday, January 14, 2013  
9:00 A.M.

San Rafael Corporate Center, Boro Room  
750 Lindaro Street San Rafael, CA 94901  

660 Tiburon Blvd.  
Tiburon, CA 94920

Agenda – Page 1 of 1

1. Board Announcements (Discussion)

2. Public Open Time (Discussion)

3. Report from Executive Officer (Discussion)

4. Energy Efficiency Program Update (Discussion)

5. Addendum to Agreement with Noble Energy Solutions (Discussion)

6. Board Member & Staff Matters (Discussion)

7. Adjourn
MEA’s Web Platform

January 8, 2013
MEA’s consumers need help cutting through a complex utility challenge

Consumers face a highly complex optimization problem…

...they are not equipped to address it…

- **Lack Skills**: Don’t know how to figure it out (tech/econ)
- **Lack Time / Effort**: It takes a lot of time to figure it out
- **Avoid Uncertainty**: Unsure efforts will actually pay back
- **Avoid Capital Costs**: Many initiatives risk large outlays

...so they postpone action – usually indefinitely.
MEA’s web-tool will maximize consumer gains with the minimum investment

Conceptual View of Correct Marginal Price Exploitation

consumption after action

3

Generation (positive RoI)
solar PV

<

2

Efficiency (high RoI)
retrofit

<

1

Behavioral (infinite RoI)
smart grid

<

Quick hits

Keep Cheap Power (remaining measures have negative RoIs)

<

Tier 4

price of electricity

Tier 3

Tier 2

Tier 1

Electricity Price (dollars per kWh)

Electricity Consumption (kWh per Day)
With simple, quick, maximized answers more consumers take more demand-reducing action

**Conceptual Illustration of Economic Optimization**

- **Key (average annual):**
  - Fuel savings
  - Equip & Installation
  - Financing costs

**Actual optimization incorporates:**
- **Time/longevity** (initial ‘life’ of subject measure)
- Multiple **action types**: behavior, efficiency, generation
- Multiple **utility services**: energy (electricity, gas, propane, oil, wood) and water
- Multiple **complex pricing schemes**
- Unique **incentives**: rebates, tax incentives, etc.
- Unique energy, equipment and implementation characteristics
- Unique **costs**: equipment, installation, etc.

**Annual Energy-Related Spending ($000s)**

- Original Bill
- Heat Pump
- Pool Pump
- Lighting
- Water Heat
- Infiltration

**Consumer gain maximized here**
MEA is working with PlanetEcosystems at the CEC to leverage this new technology state-wide.

Example: Economics Algorithm Being Reviewed by CEC

### Annual Energy-Related Spending

- **Maximize Savings**
  - From rising energy prices

- **Minimize Investment**
  - Including finance costs

#### Yearly Breakdown

<table>
<thead>
<tr>
<th>Year</th>
<th>Net Financing Payment (SCEIP or bank repayments)</th>
<th>Your New Energy Bill (PG&amp;E or equiv.)</th>
<th>Tax Credit</th>
<th>Your Energy Bill Without Action</th>
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</thead>
<tbody>
<tr>
<td>2010</td>
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<td>2020</td>
<td>$0</td>
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<td>$-30,000</td>
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</tbody>
</table>

**PLANET**
In fact, the tool maximizes consumer outcomes for most types of consumer objectives (wants/needs)
PlanetEcosystems is building tools for the MEA engagement

- **Single-Family**
  - In production
- **Multi-Family**
  - Launch January 2013
- **Small Commercial**
  - Launch Q2 2013
PlanetEcosystems Energy Action Plans:
Significantly more accurate

**Traditional Approach**

- **Based on theoretical usage**
  - Typical usage for home with similar square footage, weather, etc.
  - Limited to just electricity or electricity / gas

- **Limited view of opportunities**
  - Generally only behavior and/or efficiency

- **Calculates simplified economics**
  - Utilizes average cost of energy
  - Compares pricing plans (but not savings opportunities within plan types)
  - Ignores tax incentives
  - Table looks-ups for energy equipment costs

**PlanetEcosystems Approach**

- **Based on actual usage**
  - Reflects actual consumption and situation
  - Multiple/all utility services: energy (electricity, gas, propane, oil, wood) and water

- **Integrates across all opportunities**
  - Multiple action types:
    - Behavior (incl. load shift, DR, …)
    - Efficiency retrofits (incl. smart home)
    - Generation retrofits

- **Simplifies complex economic tradeoffs**
  - Multiple complex pricing schemes
  - Unique incentives; rebates, tax incentives
  - Unique energy, equipment and implementation characteristics
  - Time/longevity (initial ‘life’ of subject measure)
  - Unique costs; equipment, installation, etc.
Engagement Activities (PEI & MEA Partners)

- **Schools Program**
  - Student Programs (7-12)
    - Engaging students with drop ship, class-room program, PEI Tools
    - Single Family, Multi Family
    - Consumer Optimizer, Social - Competition, Compare

- **High Load Consultations**
  - In-home diagnostic visits
    - Extended in-home diagnostic visits by Advanced Energy Advocates
    - Single Family
    - Pro Optimizer

- **Neighborhood Consultations**
  - Door to door canvassing by Energy Advocates
    - Energy Advocates assist consumers capture the benefits of undertaking demand reduction measures.
    - Single Family
    - Consumer & Pro Optimizer

- **Direct Engagement**
  - Customized demand reduction messaging to each customer
    - Outbound Mailers with Energy Reports & related communications
    - All Sub Programs
    - Campaign Optimizer

We estimate you could save a net $34,736 on your utility bills!

Dear Ms. Swanson

Our analysis of utility demand history and public property information at 2300 Sunhill Drive, Davis, CA 94332 indicates that you may be able to save, net of any costs, approximately $34,736 over the next 25 years.

PLANET Ecosystems
The web solution is a one-stop shop for consumer energy management.
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Marin Energy Authority
Technological Solutions for Energy Awareness and Action

PlanetEcosystems Inc. (PEI) and Marin Energy Authority (MEA) are exploring a partnership over the 2013 – 2014 Efficiency Funding cycle to deliver action-oriented information to MEA constituents. PEI will deliver an integrated outreach campaign that reaches consumers through door-to-door canvassing, community outreach, and school based programs. The services offered by PlanetEcosystems fall into three categories:

**Web Portal Services**: Web services and tools supporting all four MEA energy efficiency sub-programs; single family, multifamily, small commercial, and finance sub-programs.

**Single Family Energy Awareness Activities**: Activity, technology and management to develop awareness and motivate consumers to action in the single family sector, through different program strategies.

**Energy Awareness and Outreach Support Activities for Multifamily, Small Commercial, and Finance**: Limited outreach engagement activities supporting MEA’s multifamily, small commercial, and finance sub-programs.

**Web Portal Services**
MEA will license with PEI for access to the powerful web tool developed in part based on experiences from Sonoma County’s Energy Independence Program. The software platform includes web portals specific to customer type, including administrative dashboards for program managers and administrators.

For a consumer, the web portal will provide recommendations for energy improvements via an online energy assessment tool. This energy assessment tool, the *utility performance optimizer*, draws on information from local county assessor data as well as historical utility consumption information to make specific recommendations to the user. Unlike other web based tools, the PEI tool allows a user to optimize the recommended improvement measures based on user defined values, such as economic savings or health and comfort. The user will then be provided access and information on applicable rebate and incentive programs and qualified service providers to facilitate the conversion from information to action.

Administrative portals allow program officials to track projects as they move through the process, from application to rebate issuance. The portal will also provide a venue for tracking program information, information needed to comply with CPUC reporting and evaluation, monitoring, and verification requirements.

See Attachment 1 for a more detailed explanation of the web portals and associated tools that collectively comprise the PEI software product.

**Single Family Energy Awareness Campaign**
PEI will train canvassing teams on the technology platform. Door-to-door canvassing by Energy Advisors (EAs), equipped with utility system optimizer technology on tablets, to
Marin Energy Authority
Technological Solutions for Energy Awareness and Action

specific neighborhoods and households (based on their pre-estimated demand reduction potential). EAs will direct residents to the consumer based web portal to further empower them to take action. Certain high energy users may be targeted for extended in-home ‘diagnostic’ visits by Advanced EAs (AEAs), also equipped with the PEI energy assessment tool on tablets. Likely sub-contract partners include Rising Sun and/or Resilient Neighborhoods.

School Based Campaigns
PEI will work with local partners to engage Grade 7-12 students in the Marin County and City of Richmond public school systems with a curriculum designed to work with PEI’s web tool and educate and energize students and teachers alike. The students will utilize PEI’s ‘Consumer Tool’ to generate Action Plans in a program developed with teachers. The tool includes social features for classroom and can facilitate intra-school competitions.

Target Outreach Pilot Program
Drawing on an outreach campaign strategy that has achieved significant results elsewhere in the country, PEI will develop targeted outreach, either through direct mailers or through electronic mail, to inform selected customers how their energy use compares to that of their neighbors. This limited pilot will be followed up with market research, including focus groups, to determine the impact and receptiveness of this approach in the Marin County and City of Richmond communities. If the results prove promising, this targeted outreach campaign could become a larger part of the PEI activities in the 2014 program.

Energy Awareness and Outreach Support Activities for Multifamily, Small Commercial, and Finance
PEI will also provide web-portal and certain outreach services in support of MEA’s multifamily, small commercial and finance sub-programs. PEI has been working with MEA to further develop the existing software platform so it will be compatible with multifamily residents. PEI and MEA will also work together to determine the right level of customization to better serve small commercial customers. Finally, PEI will build on the successful financial tools they have developed with the County of Sonoma to support MEA’s growing portfolio of financing options for energy efficiency customers. Ideally, the PEI tool will allow a customer to view different financial options and compare and contrast to select and apply for the best financial product for the energy efficiency project in mind.
Attachment 1
Web Portal Technology Components

Web Portals

**Consumer Portal:** An integrated set of tools accessible by MEA customers. This portal provides customers with the following tools, described subsequently below; a Utility System Optimizer to assist with easy system management and reconfiguration planning; several Marketplace and other tools that enable action by connecting customers to qualified service and equipment vendors, financing, and applicable incentives; and Consumer Relationship tools utilizing social networking and other mechanisms to engage consumers and develop ongoing relationships with them.

**Contractor Portal:** A set of tools accessible to approved MEA EEP service providers, such as contractors, auditors, Energy Advisors, etc., to promote a consistent and efficient provision of service to consumers. With these tools, contractors and others will have the ability to securely upload company/other material, manage their MEA-related consumer obligations, and even receive information sent by consumers.

**Program Administration:** MEA program staff will have secure access to on-line tools to administer the MEA EEP. Administrative tools and services include securely accessed custom and ad-hoc reporting, dashboard, analytic tools, and a content management system that provides for information updates and database maintenance.

**Site Management and Operations:**
PEI provides management and operations activities for the web portal technology platform. This includes website hosting by PEI; security, data management, software and system updates, technical support, and related services.

**Key Web Portal Tools**

The following suite of tools is made available through the web portals described above, and are designed to provide a consistent service across all stakeholders (consumers, vendors, program administrators, etc).

**Utility System Optimizers:** As outlined above, these tools prescribe the optimal actions for each consumer, allowing them to capture the most from their utility systems according to their wants and needs. Versions of this technology are manifested in three tools utilized within the web portals described previously:

Campaign Optimizer: This tool is used to compile mass-customized outbound messaging to engage consumers; note that all messaging will be developed with full participation and approval of MEA management and marketing. This tool utilizes consumption and other information to remotely derive utility system optimization plans for each consumer engaged; the output information,
comprising the likely most attractive outcome for each consumer, is utilized in outbound engagement messaging.

Consumer Optimizer: Pre-filled with each consumer’s estimated information, this short, quick tool is available to every consumer to develop optimized action plans, together with the estimated net upside for each consumer to motivate action. This tool is available on the web, and may be used on a tablet.

‘Pro’ Optimizer: Designed for professionals, such as auditors, contractors, and skilled consumers, this tool’s more detailed review of consumer utility systems is very effective for consumers with ‘big-ticket’ opportunities; in-person advice provides elevated consumer reassurance and confidence.

Service Provider Marketplaces: Connects consumers with service vendors; this tool can refer any consumer to any qualified service provider (HVAC, electrician, etc.), passing along relevant information, bids and scheduling as requested by the consumer. The tool also includes features that allow narrowing down referrals to providers that are relevant to each consumer’s plans.

Finance Provider Marketplaces: Helps consumer find financing; choosing between types and vendors (bank, equity credit, PACE, OBF, etc.); passing along information as requested, and includes features that allow a narrowing down to financing that is relevant to the consumer’s plans.

Equipment Provider Marketplaces: Connects consumers with vendors of equipment; the tool also includes features that allow narrowing down to equipment and providers that are relevant to each consumer’s plans.

Rebate and Incentive Tools: Helps find incentives and rebates; includes features that allow a narrowing down to those that are relevant to each consumer’s plans. Automatic rebate and incentive submissions conducted where system capability may be readily set up.

Social Competition & Gaming: Engaging social network-based tools and features that leverage known gamification techniques to bring consumers to the program and motivate action.

Consumer Management Tools: Functionality that helps consumers get a better understanding of their utility bills, manage their projects and goals, and develop a trusted relationship with MEA over the web. Key functions include alerts (highlighting new gains/opportunities, changes in utility status, pricing, etc. and other changes), bill analysis and insights and other functions.