AGENDA
REGULAR WORKSHOP OF THE
BOARD OF DIRECTORS

WEDNESDAY, FEBRUARY 3, 2021
10:00 A.M.

INLAND EMPIRE UTILITIES AGENCY*
VIEW THE MEETING LIVE ONLINE AT IEUA.ORG
TELEPHONE ACCESS: (415) 856-9169 / Conf Code: 932 945 127#

PURSUANT TO THE PROVISIONS OF EXECUTIVE ORDER N-25-20 ISSUED BY GOVERNOR GAVIN NEWSOM ON MARCH 12, 2020, AND EXECUTIVE ORDER N-29-20 ISSUED BY GOVERNOR GAVIN NEWSOM ON MARCH 17, 2020 AND IN AN EFFORT TO PROTECT PUBLIC HEALTH AND PREVENT THE SPREAD OF COVID-19, THERE WILL BE NO PUBLIC LOCATION FOR ATTENDING IN PERSON.

The public may participate and provide public comment during the meeting by dialing into the number provided above. Alternatively, the public may email public comments to the Board Secretary/Office Manager Denise Garzaro at dgarzaro@ieua.org no later than 24 hours prior to the scheduled meeting time. Comments will then be read into the record during the meeting.

CALL TO ORDER OF THE INLAND EMPIRE UTILITIES AGENCY BOARD OF DIRECTORS MEETING

FLAG SALUTE

PUBLIC COMMENT

Members of the public may address the Board on any item that is within the jurisdiction of the Board; however, no action may be taken on any item not appearing on the agenda unless the action is otherwise authorized by Subdivision (b) of Section 54954.2 of the Government Code. Those persons wishing to address the Board on any matter, whether or not it appears on the agenda, are requested to email the Board Secretary no later than 24 hours prior to the scheduled meeting time or address the Board during the public comments section of the meeting. Comments will be limited to three minutes per speaker. Thank you.

ADDITIONS TO THE AGENDA

In accordance with Section 54954.2 of the Government Code (Brown Act), additions to the agenda require two-thirds vote of the legislative body, or, if less than two-thirds of the members are present, a unanimous vote of those members present, that there is a need to take immediate action and that the need for action came to the attention of the local agency subsequent to the agenda being posted.

1. WORKSHOP
   A. ENERGY MANAGEMENT
B. WATER STORAGE INVESTMENT PROGRAM STATUS UPDATE

2. GENERAL MANAGER’S COMMENTS

3. BOARD OF DIRECTORS’ REQUESTED FUTURE AGENDA ITEMS

4. DIRECTORS’ COMMENTS

ADJOURN

*A Municipal Water District

In compliance with the Americans with Disabilities Act, if you need special assistance to participate in this meeting, please contact the Board Secretary (909) 993-1736, 48 hours prior to the scheduled meeting so that the Agency can make reasonable arrangements.

Declaration of Posting

I, Denise Garzaro, Board Secretary/Office Manager of the Inland Empire Utilities Agency*, A Municipal Water District, hereby certify that a copy of this agenda has been posted by 5:30 p.m. on the Agency’s website at www.ieua.org and at the Agency’s main office, 6075 Kimball Avenue, Building A, Chino, CA on Thursday, January 28, 2021.

Denise Garzaro, CMC
1A
Energy Management Workshop

Pietro Cambiaso, P.E.
Deputy Manager of Strategic Planning and Resources
February 2021
Overview

- Current Energy Issues
  - Public Safety Power Shutoff (PSPS)
  - Electricity rate trends
- IEUA planning and mitigation efforts
  - Energy efficiency
  - Energy portfolio
  - Future proposed projects
- IEUA goals and objectives
“To help protect customers and communities during extreme weather events, Southern California Edison (SCE) may shut off electric power for public safety in an effort to prevent a wildfire”

• 2020-22 SCE Wildfire Mitigation Plan
  – Situational awareness
  – Vegetation management
  – Enhanced overhead inspection
  – Grid design and system hardening
  – Emerging technologies
Electricity Rate Trends

Cents/kWh vs Fiscal Year

U.S. Average (excluding CA)
Public Safety Power Shutoff Emergency Preparedness

• IEUA enhanced collaboration with SCE
  – Updated emergency contact information
  – Advanced notice (7 days to 1 day ahead)
• Standby generators proper operation
  – Maintenance and periodic testing
  – Fuel resupply
• Staffing
• On-site generation microgrid long term solution
Effectively manage and reduce energy consumption

• Energy monitoring and benchmarking
• Facility audits
• Energy retrofits
• Treatment process optimization
• Sustainable design and procurement
## Energy Efficiency Projects

### Completed Projects Since 2015

<table>
<thead>
<tr>
<th>Project</th>
<th>Energy Savings (kWh/year)</th>
<th>Cost Savings ($/year)</th>
<th>Incentive ($/year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pump Rehabilitation</td>
<td>3,119,443</td>
<td>$369,168</td>
<td>$299,478</td>
</tr>
<tr>
<td>Operational Optimization</td>
<td>957,459</td>
<td>$119,495</td>
<td>$86,707</td>
</tr>
<tr>
<td>Lighting Retrofit</td>
<td>1,158,635</td>
<td>$126,331</td>
<td>$104,677</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>5,235,537</strong></td>
<td><strong>$614,994</strong></td>
<td><strong>$490,861</strong></td>
</tr>
</tbody>
</table>

Cost Savings = 9% IEUA Energy Budget
Renewable Energy Portfolio and Resource Management 2020

- **RP-1**
  - Solar 0.83 MW
  - Battery 1.3 MW
  - 21%

- **RP-4/IERCF**
  - Solar 2.5 MW
  - Wind 1 MW
  - Battery 1.5 MW
  - 100%

- **RP-5**
  - Solar 1 MW
  - Engines 3 MW
  - Battery 0.5 MW
  - 250%

- **CCWRF**
  - Solar 0.62 MW
  - Battery 0.78 MW
  - 48%

Connected Capacity
Electricity Procurement (Current)

SOUCHERN CALIFORNIA EDISON 44%

Shell ENERGY 46%

90%

FY 19/20 Procurement

Inland Empire Utilities Agency
A MUNICIPAL WATER DISTRICT
Electricity Procurement (Proposed)

- Southern California Edison: 32%
- Shell Energy: 33%
- Total: 65%

Inland Empire Utilities Agency
A Municipal Water District
Energy Storage Update (Year 1)

- RP-1, RP-5, and CCWRF Battery Storage
  - Average demand reduction = 330 kW
  - Net cost savings = $55,000

- RP-4 and IERCF Battery Storage and Solar
  - Average demand reduction = 330 kW
  - Solar generation = 2,255,000 kWh
  - Net cost savings = $87,000

- O&M provider change from Advanced Microgrid Solutions (AMS) to Enel X
Beneficial Use of Biogas – RP-1 Feasibility Study

Biogas from Digesters

- Existing Boilers
- Internal Combustion Engines (2 x 1.4 MW)
- Internal Combustion Engines PPA (2 x 1.4 MW)
- Microturbines (2 MW)
- Fuel Cell PPA (2.8 MW)
- Renewable Natural Gas Pipeline Injection
- Compressed Natural Gas Fueling Station

Electricity Generator

Advanced Gas Cleaning
Beneficial Use of Biogas – Heat for Plant Use

- **Existing Boilers**
  - Fulfill digester heat requirements
  - 50% beneficially used – 50% to flare
  - Electricity purchase from
    - Grid
    - Solar PPA
Beneficial Use of Biogas – Electricity Generator

- **Internal Combustion Engines (2 x 1.4 MW)**
  - High electricity production and flexibility
  - Heat recovery
  - Proven technology
- **Microturbines (2 MW)**
  - Low electricity efficiency
  - Low life cycle
- **Fuel Cell (2.8 MW)**
  - High electricity efficiency low flexibility
  - Heat recovery
  - Stringent gas cleaning system requirements
Beneficial Use of Biogas – Advanced Gas Cleaning

• Renewable Natural Gas Pipeline Injection
  – No electricity production and no on-site use
  – Renewable natural gas and environmental attributes sale
  – High capital and interconnection costs

• Compressed Natural Gas (CNG) Fueling Station
  – No electricity production and no on-site use
  – CNG and environmental attributes sale
  – High capital cost
Beneficial Use of Biogas – RP-1 Feasibility Study

- Biogas from Digesters
  - Heat for Plant Use
    - Existing Boilers
    - Internal Combustion Engines (2 x 1.4 MW)
    - Internal Combustion Engines PPA (2 x 1.4 MW)
    - Microturbines (2 MW)
    - Fuel Cell PPA (2.8 MW)
  - Electricity Generator
  - Advanced Gas Cleaning
    - Renewable Natural Gas Pipeline Injection
    - Compressed Natural Gas Fueling Station
RP-1 Feasibility Study Recommendation

- Internal Combustion Engine Power Purchase Agreement (PPA)
  - Electricity cost savings
  - Digester heating
  - Reduce flaring
  - No up-front capital costs
  - No additional staff
  - Long-term electricity cost stability and predictability

- Issue Request for Proposal for Internal Combustion Engine
  - IEUA owned
  - Power Purchase Agreement
Other Feasibility Studies

• Floating solar
• Headquarter carport solar
• Compressed natural gas sale
• Biomethane sale via pipeline injection
• In-line hydroelectric power generation
• Flexible recycled water pumping - Electric Power Research Institute
• Overgeneration pilot project – SCE
• Aeration basin off-gas analyzer – SCE, University of California Irvine
Next Steps

- RP-1 Internal combustion engine – Request for Proposal
- RP-5 Solids Handling Facility – Feasibility Study
- Energy efficiency projects implementation
- Electric vehicle charging station installation
- Electricity purchase negotiation
- Bill auditing and SCE rates evaluation
- Greenhouse gas emissions monitoring
- RP-5 Renewable Energy Efficiency Project (REEP) engines retrofit
Agency Power Usage Projections

- 1158 Recycled Water Pump Station Upgrade
- RP-5 Expansion
- RP-1 Capacity Recovery Project
- Advanced Water Treatment

2019: 50,000 MWh
2020: 100,000 MWh
2025: 150,000 MWh
2030: 200,000 MWh
2035: 250,000 MWh
Greenhouse Gas Reductions Goals

- California Global Warming Solutions Act of 2006 (AB 32)
  - 1990 levels by 2020
  - 40% below 1990 levels by 2030
  - 80% below 1990 levels by 2050

- 2019 IEUA Climate Change Action Plan
  - 2007 levels by 2020
  - 40% below 2007 levels by 2030
  - 80% below 2007 levels by 2050

![IEUA Greenhouse Gas (GHG) Emissions Graph]
IEUA Business Goals

Energy Management Objective

“IEUA will effectively manage energy resources including renewable energy initiatives and programs to achieve statewide environmental and renewable energy goals, and stabilize future costs.”
Water Storage Investment Program
Status Update

February 2021
• 2017: IEUA submitted WSIP application
  • 15 TAFY Advanced Water Purification
  • 15 TAFY Injection and storage of advanced purified RW
  • 20+ new groundwater wells
  • New interconnection with Metropolitan Water District

• 2018: $207M conditional funding awarded for Delta ecosystem benefits

• Jan 1, 2022: Deadline to secure funding
Aug 2020 IEUA Board direction:

• Re-structure program to address local agency concerns

• “Leave no stone unturned” before making decision on $207M funding
Stakeholder Discussion Status

- Local Agencies
- Metropolitan Water District
- California Water Commission
Program Goals & Objectives

**No-WSIP**
- Meet IEUA permit compliance for recycled water

**WSIP**
- Proactively meet IEUA permit compliance for recycled water
- Provide increased reliability:
  - Imported water
  - Groundwater treatment
- Secure external water supplies
Funding Alternatives

• **WSIP and No-WSIP costs** funded by loans and rates

• **No-WSIP ($306M – permit compliance)**

• **WSIP ($650M – permit compliance & water supply reliability)**
  • $207M + $5M from California Water Commission
  • Eligible for Federal funding from WIIN Act
  • Investigating potential funding partnership with Metropolitan
### Program Benefits & Issues

<table>
<thead>
<tr>
<th>No-WSIP</th>
<th>WSIP</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Benefits:</strong></td>
<td><strong>Benefits:</strong></td>
</tr>
<tr>
<td>✓ Maintains current use of recycled water</td>
<td>✓ Maximizes use of recycled water</td>
</tr>
<tr>
<td>✓ Lower initial capital cost</td>
<td>✓ Provides increased imported water reliability</td>
</tr>
<tr>
<td><strong>Issues:</strong></td>
<td><strong>Issues:</strong></td>
</tr>
<tr>
<td>❑ Water resource reliability concerns not addressed</td>
<td>❑ Dedicates water for 25 years to Metropolitan</td>
</tr>
<tr>
<td>❑ Unknown future opportunities for substantial grants</td>
<td>❑ Accelerates construction of facilities</td>
</tr>
<tr>
<td>❑ Does not address extended imported water interruptions</td>
<td>❑ Local O&amp;M costs</td>
</tr>
<tr>
<td>$212M in grant and eligible for federal grants</td>
<td></td>
</tr>
</tbody>
</table>
Timeline & Upcoming Milestones

Apr 2021
Develop conceptual terms of partnership with Metropolitan

Fall 2021
Develop WSIP Delta Operations agreement
Develop term sheet for local operations and groundwater exchange
IEUA Board Action (Nov)

Dec 2021
Deadline to submit Final Feasibility Report to secure funding by Jan 1, 2022