Demo Day
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Dynamhex, Inc.
Sunny Sanwar, sunny@dynmhx.io
CEO

EPRI
Siva Sankaranarayanan, ssankaranarayanan@epri.com
Sr. Technical Leader

Ameren
Eli Gerson, egerson@ameren.com
Manager of Innovations
About the Need/Opportunity

Utilities play a key role in the decarbonization needed by corporations, cities and states – but unstandardized data around sustainability means:

- Insufficient knowledge around energy transitions
  - How to engage internal and external stakeholders on sustainability commitments, initiatives

- Barrier to making complex decisions on sustainability
  - How to measure timely progress on performance at various levels, from meter, customer to community-level outcomes

- **Opportunity**: Residents, businesses, partners of businesses and customers of business are increasingly interested in sustainability and carbon footprints.

- **How we Help**: The Dynamhex platform allows utilities to play a major role in sustainability in their territory, increasing the revenue opportunity for the utility while decreasing the cost/time spent on sustainability for the customer.
Utilities are developing decarbonization roadmaps

Designing strategies to respond to various drivers, to identify implementable actions

<table>
<thead>
<tr>
<th>DRIVERS (D)</th>
<th>STRATEGIES (S)</th>
<th>ACTIONS (A)</th>
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<tr>
<td>Policy</td>
<td>Efficiency</td>
<td>Programs</td>
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<tr>
<td>- State, Local goals</td>
<td>- Building Envelope</td>
<td>- Reduced first cost</td>
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<td>- Corporate goals</td>
<td>- Improved end-use efficiency</td>
<td>- Improve customer enrollment</td>
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<td>- Federal policy</td>
<td>Electrification</td>
<td>- On-Bill Financing</td>
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<td>Market</td>
<td>- Space Conditioning</td>
<td>- Equitable Decarbonization</td>
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<td>- Customer interest</td>
<td>- Water Heating</td>
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<td>- Customer adoption</td>
<td>- Appliances/Cooking</td>
<td>- Rate Alignment with electrification</td>
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<tr>
<td>Technology</td>
<td>Flexibility</td>
<td>Codes &amp; Standards</td>
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<tr>
<td>- Technology Readiness</td>
<td>- Distributed Energy Resources</td>
<td>- EV Readiness for new construction</td>
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<td>- Product/Technology Support</td>
<td>- Load Shifting/Shedding/Shaping</td>
<td>- End-use flexibility standards</td>
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<tr>
<td>Low Carbon Resources</td>
<td>- Dual Fuel approaches</td>
<td>- Special provisions for disadvantaged communities</td>
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Implementation = A \(\otimes\) S \(\otimes\) D

Implementations are developed using actions (A) pertaining to a strategy (S) in response to a driver (D).
Key Implementation Challenges

▪ How to define appropriate KPIs and actions
  – Helps understand effectiveness of the implementations in relation to decarbonization drivers?

▪ How to collaborate on tangible strategies
  – Help customers, residents, corporations and local governments with data-driven insights on actions

▪ How to accomplish the implementation
  – Helps meet decarbonization objectives in an equitable manner
About the DaaS Technology

Dynamhex’s Decarbonization-as-a-service (DaaS) is a customer-centric platform to enable Ameren and partners to:

- Help their customers* understand their climate commitments relative to Ameren’s initiatives products, projects and services, and take action
- Help their customers set and meet their decarbonization goals with strategies involving future Ameren programs and solutions.
- Help their communities visualizing corrective measures available to Ameren customers to ease implementation,
- Help internal Ameren planning by simplifying the complexity around ESG, social equity, portfolio health costs reduction at granular levels across different drivers

*In select areas of Ameren service territory (Ameren-IL, Ameren-MO)
About the Technology – Dynamhex DaaS

Dynamhex aggregates community-wide synthetic data to define energy + climate KPIs

- Compatible with customers inventory standards and protocols (Local governments, community-wide planning, corporate footprint)
  - Reporting protocols covered CDP, SASB, TCFD, EEI, ICLEI, GCOM etc.
- Bottom-up modeling based on public and proprietary data-sets for site and metered energy-use-intensity (EUI) based building-specific consumption patterns, and marginal emission rates for grid regions.
- Better targeting using building models based on occupancy, ownership, vintage, orientation and load-profiles (EE, DR, DER) and TZA-level vehicle VMT for transportation (EV scenarios)
  - Both demand-side and supply-side models that are community and market specific
  - Built-in verified offsets for customers to simply offset their calculated carbon-footprint through single-click
- Simple DaaS API to connect to utility billing for utilities in the U.S.
  - (78% of national service meter coverage) for revenue-grade CO₂ footprint (i.e. customer load profile at meter-level + marginal emissions from grid)
How it works

1. Select a building, customer or campus, city/county in the service area.

2. Select a building type, as well as C&I breakdowns such as Convenience Store, Educational & Congregational, Food Service & Restaurants, Government, Healthcare, Medical & Dental, Industrial, IT Data Center, Lodging, Non-Profit, Office Building, Retail, Supermarket, Warehouse or ownership residential, commercial, institutional etc.

Examples from pilot
3. Pick a customer parameter filters, such as ownership, fuel type, square footage, load levels or year built.

Example from pilot
How it works

4. Quantify the total Scope 3 emissions and decarbonization potential, or climate impact or the selected candidate buildings or customers across interventions.

5. Download project list for the region or building set for implementation (PDF – see next page, .xlsx, .csv), or

6. Enter your map, product or switching service (fuel oil to electric or natural gas) to see the emission reduction potential of the selected assets.

Example from pilot
Project Scope and Findings

Key Objective:
• A utility module for decarbonization planning and engagement, as-a-service (cloud-based) in certain Missouri and Illinois service areas.

Key Deliverables:
• Dynamhex deployed and tested Decarbonization-as-a-service stack in 3 counties
  • City of St. Louis, MO, St. Louis County, MO and Champaign County, IL
  • Overlaid existing –IL and –MO programs to engage customers on reducing emissions
• Integrated with the local community-wide climate goals/corporate GHG emissions reduction targets
  • Gathered feedback from key accounts and customers (corporate, community, university) about integration
  • Gained insights on how Ameren can help align their existing strategies and initiatives
  • Sharable and embedded widgets + API access for further analyses for both Ameren and their customers
Equitable decarbonization

- Dynamhex DaaS mapped a portion of the Ameren service territory (City of St. Louis, MO, St. Louis County, MO and Champaign County, IL)
  - Multiple building types (residential, small business, C&I, municipal, university)
  - 1.1M people across 100+ cities and incorporated towns in 3 counties
- Overlaid 35+ existing programs (IL, MO portfolio) on renewables, efficiency, electrification and demand response
  - Measured abated emissions/social costs for programs
  - Engaged customers on reducing emissions by integrating with the local community-wide as well as state climate goals
    - Ameren programs shows customers how sustainability goals are met
    - Helps other customers who are looking to set goals, access right data

Testimonials from the pilot

This is so impressive! We can use this for our regional planning where we require Ameren data; as well as our benchmarking ordinances to better coordinate with building owners, while showing leaders at the zip-code level - City Alderman

For our residents to take the next step on their sustainability journey, a dynamic and personalized action-plan is needed; Dynamhex can provide that for our renewable programs- City Sustainability Officer

We need this platform access for current projects we are in the midst of, as well as some of our industrial locations for which we have a blind spot - Corporate customer with ESG goal

We have a new capital budget for updating buildings and equipment, and DaaS could help us how to triage and balance which measures we can implement on which asset, and for what type of impact – University customer with a campus-wide climate target
Next steps for Dynamhex DaaS

- **Ameren**: New region-wide initiatives and customer use-cases (benchmarking ordinances) discovered during demos
  - Exploring service-territory wide deployment and white-labeling service for customers
  - Emerging state-wide goals, such as IL energy plan and state-wide environmental justice standards

- **Other utilities**: Dynamhex DaaS can be mapped to all, or a portion of your service territory as a turn-key project
  - Nearly all utilities have cities and corporate customers within their territory with near-term climate goal
    - Nation-wide push on equity and justice in energy transition as well as power sector decarbonization (80% by 2030 nationwide; 100% by 2035)
  - Overlay your programs and initiatives that customer-specific or city-specific
    - Building stock decarbonization (residential, small business, C&I, municipal, university) modules + EV planning
    - Empower program managers and account managers

- **EPRI**: Test power sector standards for decarbonization models and current scenario
  - Analyses and reporting of different DaaS modules throughout working groups within EPRI
  - Disseminating best practices on decarbonization and energy transition
Contact us!

Contact Alex Calder, VP of Business Development

For scheduling a demo of your territory and customers

alex@dynmhx.io
www.dynmhx.io
@dynamhex

Step 1: Sign up for a demo.
Start an annual contract (billed monthly), aligning sustainability goals, metrics, and information with Dynamhex platform

Step 2 (optional): Upload customized datasets or connect your data through our APIs with the Dynamhex DaaS backend

Step 3: Access full carbon inventory for your assets as well as your territory or customers

Step 4: Test emissions reductions solutions, monitor and track emissions changes. Engage community by embedding our map services to your dashboard
Our Team

Utility Representative:
Eli Gerson, Manager of Innovations at Ameren.

Startup Representative:
Sunny Sanwar, CEO, Dynamhex, Inc.

EPRI Representative:
Siva Sankaranarayanan, Sr. Technical Leader, EPRI.
With sustainability goals becoming the norm, true leaders need to prove sustainability claims with standardized data. Dynamhex helps you provide auditable accounting for clients’ energy and carbon footprint in real time across complex portfolios.

1. Search and add your clients across corporate, municipal or academic segments.

2. Understand client’s goals in relation to your offerings.
Consumers today demand stronger visibility of time, location, source, and environmental characteristics of their energy supply - Dynamhex provides a straightforward user experience for corporations with expansive footprints and sustainability goals.

3. Select a client and see a list of owned and leased assets with baseline emissions.
Deliver new and differentiated solutions for your customers resulting in stronger consumer engagement and improved relationships. On-site generation with storage and off-site supply, retrofits, upgrades, RECs and offsets.

4. Understand and analyze their current consumption and asset-level footprint, and the impact your products would make.

We have already connected to utility accounts to sync actual bill data for your customers.
Integrate with existing carbon accounting and low-carbon market standards or tracking systems across geographies, to showcase environmental attributes of your products in a comparable and trackable way.