re: Invent

NOV. 28 - DEC. 2, 2022 | LAS VEGAS, NV

ENU204-L

Innovation and reinvention across the energy value chain

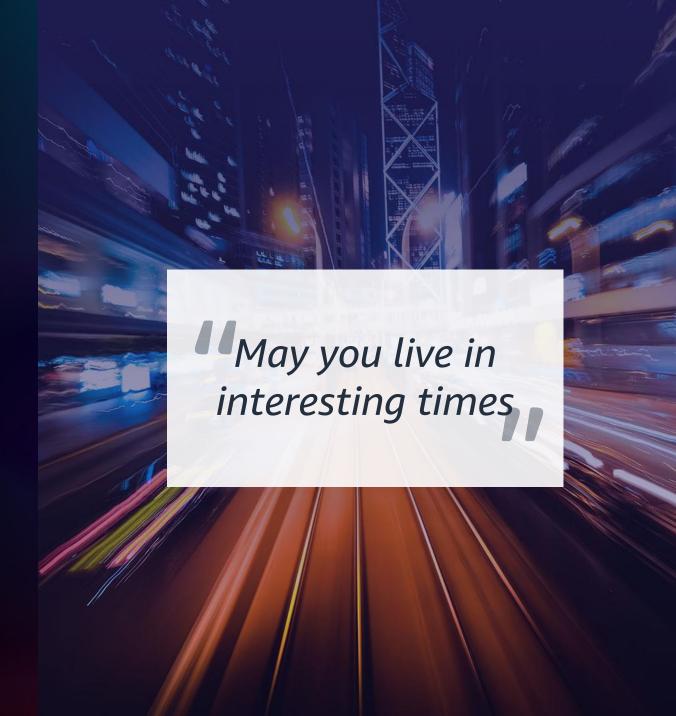
Howard Gefen

GM, Energy and Utilities Amazon Web Services



Today's energy economy is complex . .

- Demand resilience
 - Energy supply challenges
 - Capital constraints
 - Logistics
 - ESG
 - Digital
 - Global finance
 - Renewables
 - Regulations
 - Energy Security
 - Transition
 - Emerging energy technologies
 - etc....





- Global energy demand forecast to increase by 47%
- Renewable energy demand and sources expected to more than double
- Liquid fuels demand will be at equivalent levels to renewables

Source: EIA, International Energy Outlook 2021



Green Hydrogen



Carbon Capture & Storage



Battery Storage System



Onshore Wind



Offshore Wind



Direct Air Capture of Greenhouse Gases



Power Trading



Batteries



Solar



Blue Hydrogen with CCS



EV Charging



Carbon Trading



Hydro



Ammonia Production with Carbon Capture and Sequestration (CCS)

- Requires a reimagining of current energy systems
- Built to leverage data across the energy value chain
- Designed to scale and accelerate the energy transition

Energy systems of the future



Expanding energy landscape





More complex, integrated energy value chain





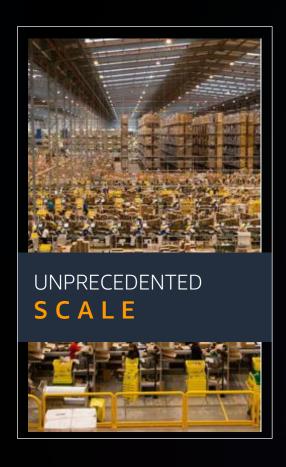
Evolving customer energy needs



New innovation opportunities



What you probably already know about Amazon









Accelerating the energy transition



Net-zero carbon by 2040

PLEDGE Early

Path to 100% renewable energy by 2025

\$2 billion clean tech

Renewable energy

Amazon is the largest corporate buyer of renewable energy globally

Once online, enough power for more than 3.9 million US homes or 11 million European homes/year

More than 300 projects around the world

Supply chain

Transitioning our buildings to be net-zero carbon

Sustainable transportation – electric vehicles

Carbon Footprint Tool



AWS energy industry business unit

1 of 8

AWS strategic industries 7,000+

industry customers

400+

energy specialists

200+

energy solutions and accelerators 100K+

marketplace partners

annual growth



Our customers and AWS Partners are also reinventing the energy industry

Customers Partners





This is not a complete list. To view all AWS Partners for this category, visit AWS Partner Solutions Finder. This list of partners is current as of November 25, 2022.





Accelerating innovation

Baker Hughes **>**



enel



Reducing time to value

Simplifying data

Driving transformation

Increasing innovation

Migrated its computational fluid dynamics (CFD) applications to AWS

- Saved 40% on HPC costs
- Reduced carbon footprint of the HPC solution by 99%

Simplified their data processes when they chose AWS for their Industrial Data Platform

- Reduced IT and maintenance costs
- Improved reliability and visibility of their equipment

Transformed its operations when it migrated its IoT and energy management platforms to AWS

- Saved 21% on compute costs
- Saved 60% on storage costs

Accelerated innovation and eliminated data silos after migrating to AWS

- Enabled greater speed, flexibility, and rapid experimentation
- 24/7 production monitoring and optimization



Leadership session: Panelists



Bonnie Titone

Duke Energy Senior Vice President and Chief Information Officer



Rick Snell

Phillips 66
Manager, Digital
Foundations and
Enterprise Architecture



Rudolf "Rudy" Pawul

ISO New England Vice President, Information and Cyber Security Services



Thank you!



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