EMERGING UTILITY BUSINESS MODELS

NARUC WINTER MEETING

FEBRUARY 11, 2018



David O'Brien Director

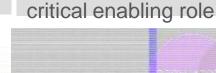


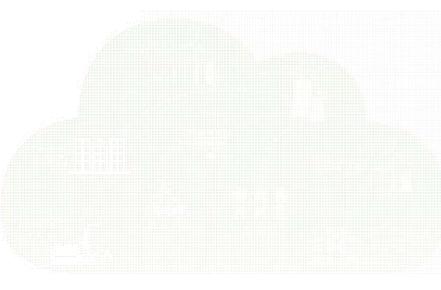
THE ENERGY CLOUD

A CHANGED BUSINESS & OPERATING ENVIRONMENT WHERE THE UTILITY IS THE CENTRAL ENABLER OF DIVERSE BUSINESS MODELS

TODAY: The Energy Cloud

Distributed, Cleaner, Two-Way Power Flows



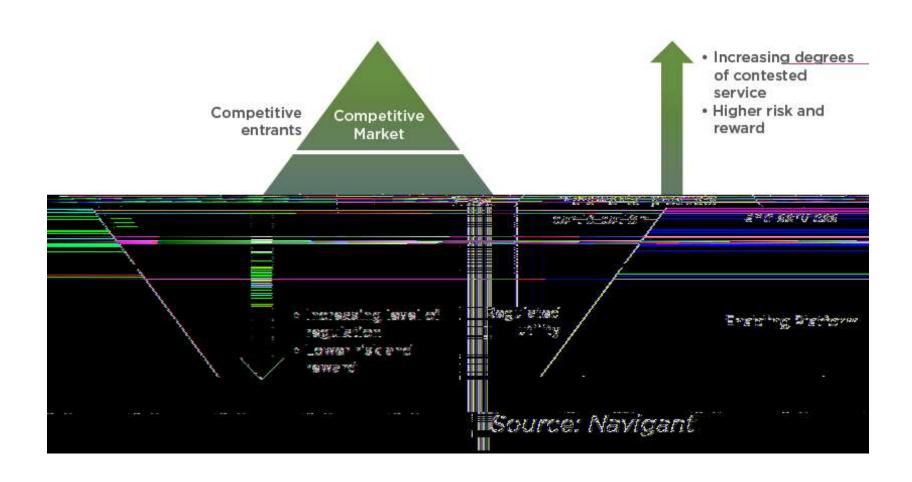




Regulated Platform: Distribution utility plays

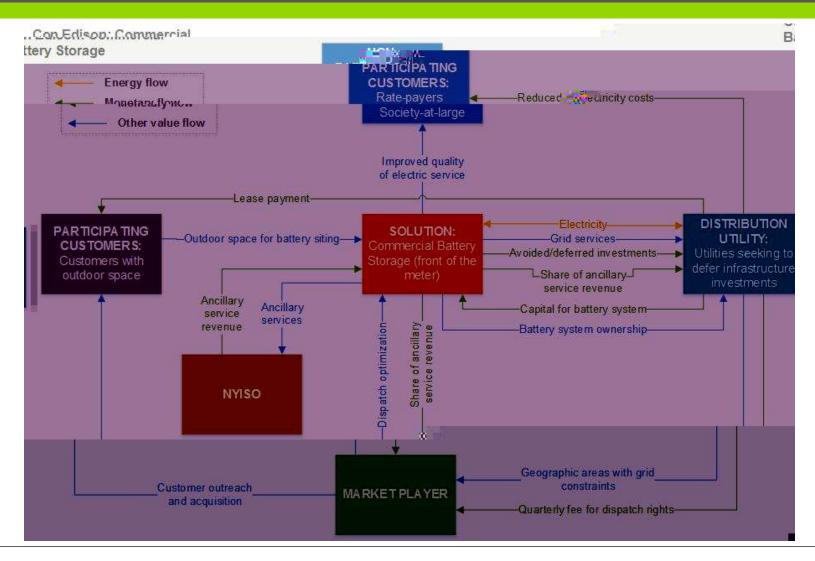
¹ Navigating the Energy Transformation: Building a Competitive Advantage for Energy Cloud 2.0 (white paper)

AS DER SOLUTIONS PROLIFERATE THE REGULATED UTILITY BUSINESS BECOMES A CONTESTED MARKET





BUSINESS MODEL DIAGRAMS OUTLINE ROLES AND BENEFITS OF NEW CUSTOMER OFFERINGS



UTILITIES ARE LEVERAGING DER SOLUTIONS TO BRING NEW **VALUE TO CUSTOMERS**

GMP - NEW PRODUCTS AND SERVICES THROUGH PARTNERSHIPS

GMP is building the utility of the future ecosystem for their customers through its vertically integrated franchise.

- **Personal Energy Management:** A comprehensive multilevel, home control and convenience offering to remotely manage energy consumption in homes and to increase comfort and save money
- NRG Portable Power: GMP offers NRG's Portable Power solution, allowing customers to break free from the outlet and charge their smartphones with an NRG Power Pack
- **EV Infrastructure:** GMP works with NRG's eVgo to develop and roll out an expanded, interconnected network of EV charging stations throughout the state, including several charging package options.

Source: Green Mountain Power





Offering NEW-AGE ENERGY PRODUCTS DIRECTLY TO CUSTOMERS, including heat pump water heaters, heating and cooling systems, EV charging, and home energy management.

In reality, hybrid models most likely to emerge, consistent with existing leading examples

UTILITY PROCUREMENT OF THIRD PARTY SOLUTIONS



SPLIT ROLES BY PRODUCT OR SCOPE OF ACTIVITY

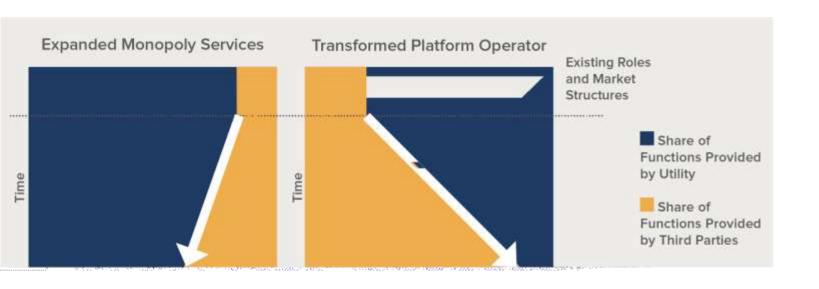


UTILITY HOSTED MICROPLATFORMS





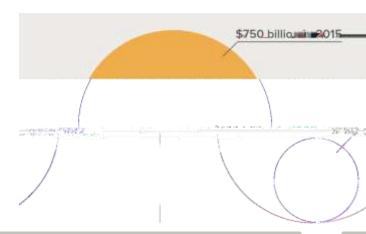
Regardless of the model, an increasing share of functions may be performed by third parties – but the overall market may also grow





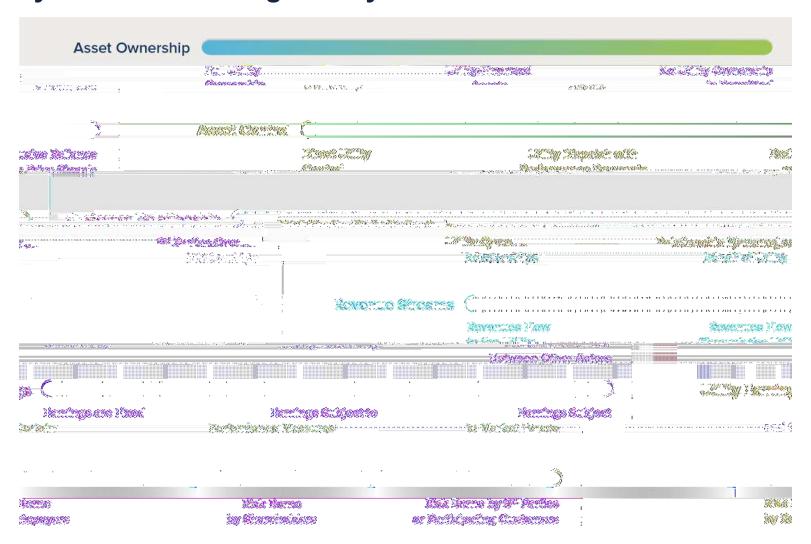
SPECTRUM OF UTILITY MODELS

GROWTH IN TELECOM MARKET SIZE SINCE DEREGULATION AND MARKET REFORM





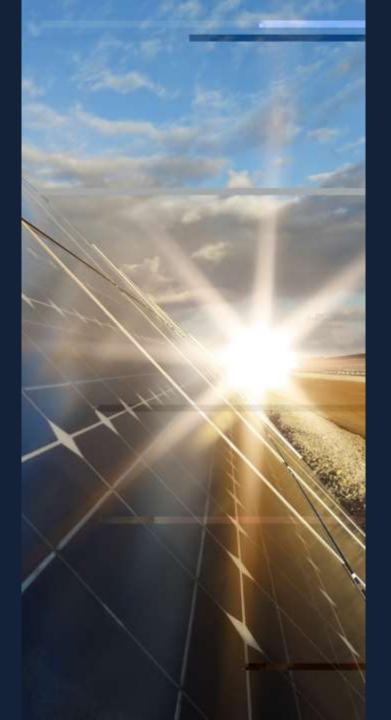
Key questions – beyond just DER ownership – can help align utility actions with regulatory vision





Utilities and regulators can take no-regrets moves to explore new utility roles in DER optimization, regardless of the model chosen





Thank You

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