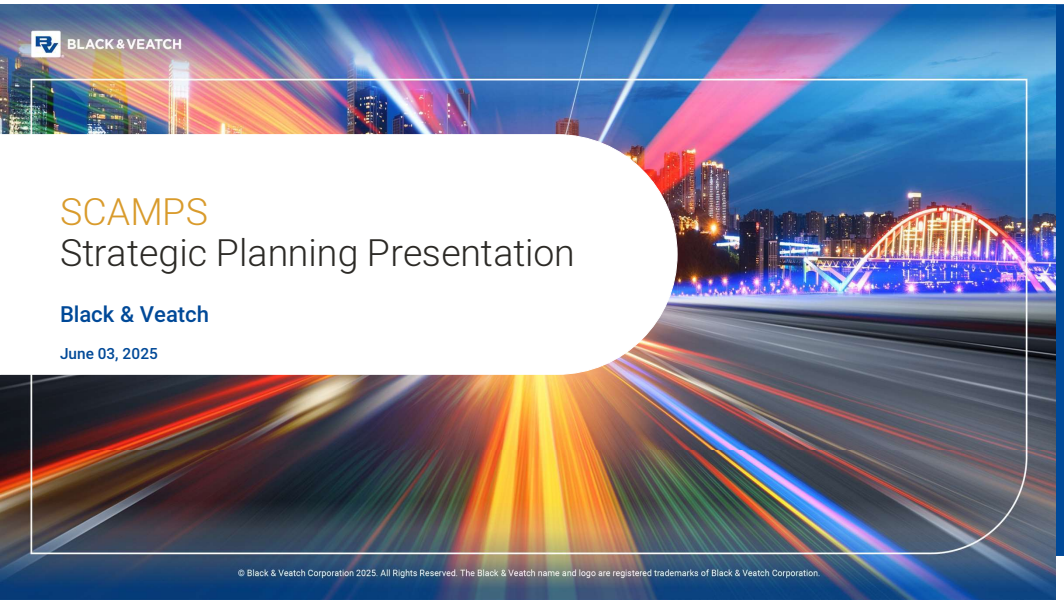

Agenda

- Purpose & Objectives
- Industry Perspective
- Strategic Planning Process
  - Purpose, Mission, Vision, & Values
  - Initiatives & KPIs
- Electric System Planning Highlights
- General Considerations

Presentation Purpose and Objectives

Purpose

Discuss strategic planning associated with Electric Systems in the United States

Objectives

Understanding:
Gain an understanding of the Strategic Planning Framework and Process

Idea Generation:
Brainstorm potential areas and ideas for SCAMPS members to consider and strategically position

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Industry Perspective

2024 Electric Industry Report – Industry Overview

Methodology:
- BV sponsored & administered the review
- BV administered online questionnaires/surveys
- A convention of communication established with participants
- Social media utilized as a basis to interface with participants

Sampling Plan:
- Multi-stage screening of questionnaires/surveys
- United States Electric Utilities
- Significant amount of email invitations and other communications deployed to professionals across United States

Survey Results:
- Over 700 power industry stakeholders participated in survey
- Report provides a dynamic overview of the Industry Drivers and Challenges faced by Electric Systems in the United States

Dynamic Perspective of Electric System Drivers & Challenges

2024 Electric Industry Report – Lessons Learned

Energy Transition

The energy ecosystem favors renewables with solar leading the way

Grid Resilience & Reliability

Updating, hardening, and modernizing the grid to facilitate in inclusion of utility-scale renewables and other generation

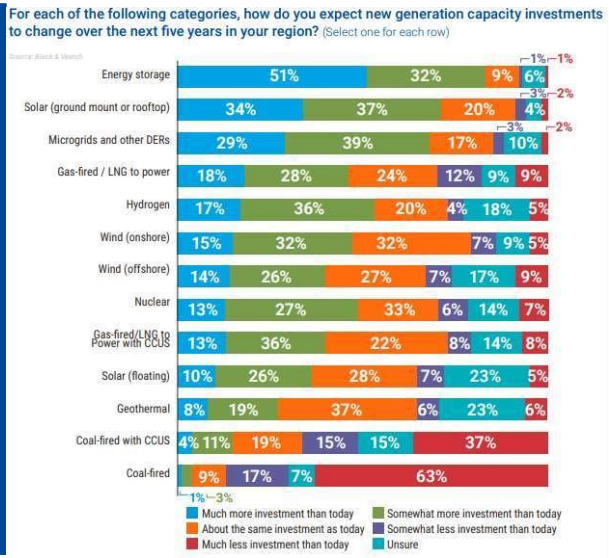
Cybersecurity

As the complexity and sophistication of IT and OT networks grow, cyber criminals seek opportunities to penetrate these networks

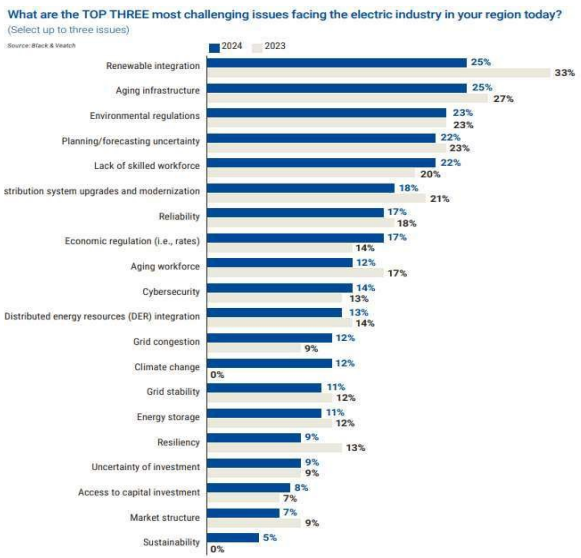
Data Centers

Data center are rapidly adding pressure to Electric Systems' generation, T&D, and operating resources

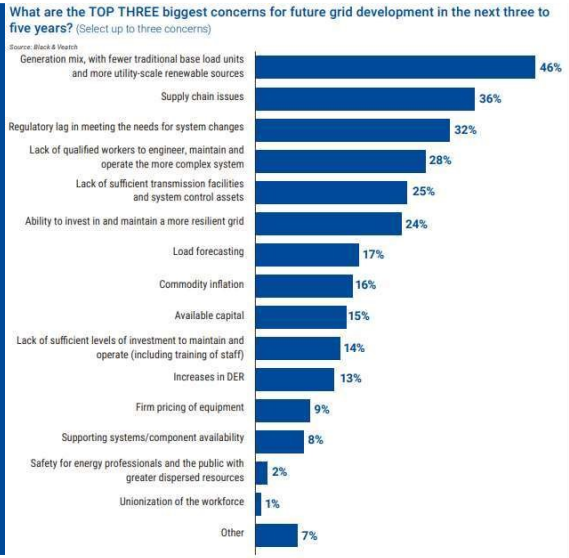
2024 Electric Industry Report – New Generation Capacity Investment



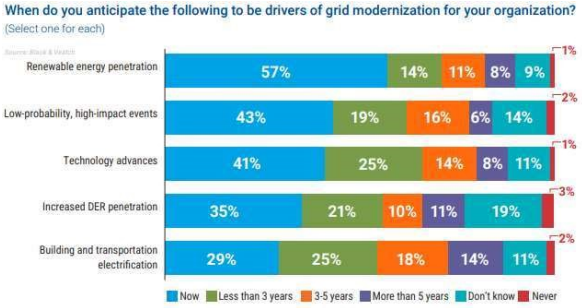
2024 Electric Industry Report – TOP THREE Most Challenging Issues



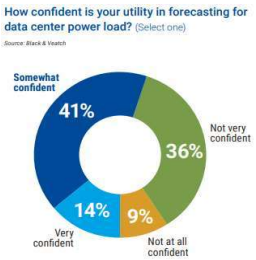
2024 Electric Industry Report – TOP THREE Biggest Concerns

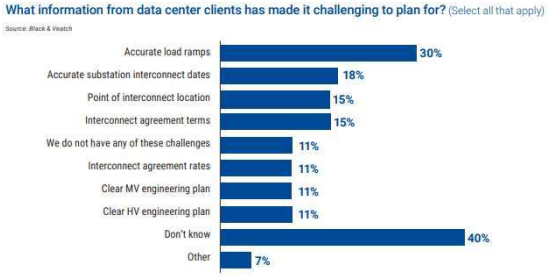


2024 Electric Industry Report – Drivers of Grid Modernization



2024 Electric Industry Report – Data Centers





Strategic Planning Process

Strategic Planning Process

What is Strategic Planning?

Strategic Planning is the ongoing organizational process of using available knowledge to document a business' intended action. This process is used to prioritize efforts, effectively allocate resources, align shareholders and employees on the organization's goals, and ensure those goals are backed by data and sound reasoning.

Note:
1. Harvard Business School - HBS Online, Business Insights: What is Strategic Planning?

Characteristics of a Strategic Plan

Ownership and Collaborative
- Senior management involvement and commitment
- Staff input, understanding, and commitment
- Customer support

Visionary
- Timing convention
- Clear, concise, and relevant Vision and Mission
- Informed by the pass
- Guided by future
- Evaluate future scenarios

Actionable
- Implementation Plan
  - Aligned and cascaded
  - Clear accountability
  - Regular progress reporting and servicing
  - Adjustments and updates

Fact Based
- Responsive to customer and stakeholder needs
- Objective SWOT Analysis
- Balance Utility System Requirements
  - Known and measurable

Focus
- Multi-layered goals, metrics, and actions
- Identify "boundaries" and "red flags"

Components of a Strategic Plan

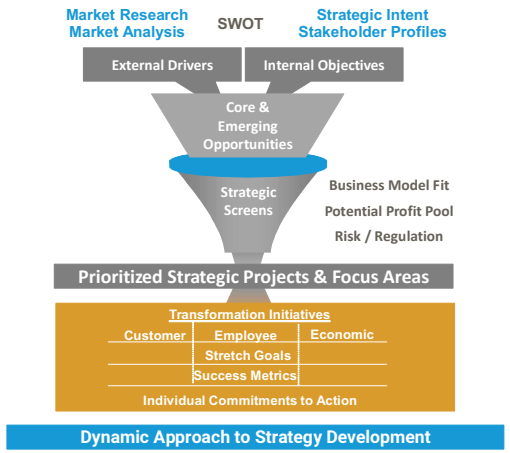
Vision – What does the Entity aspire to become?

Initiatives – What are the critical business imperatives of the Entity?

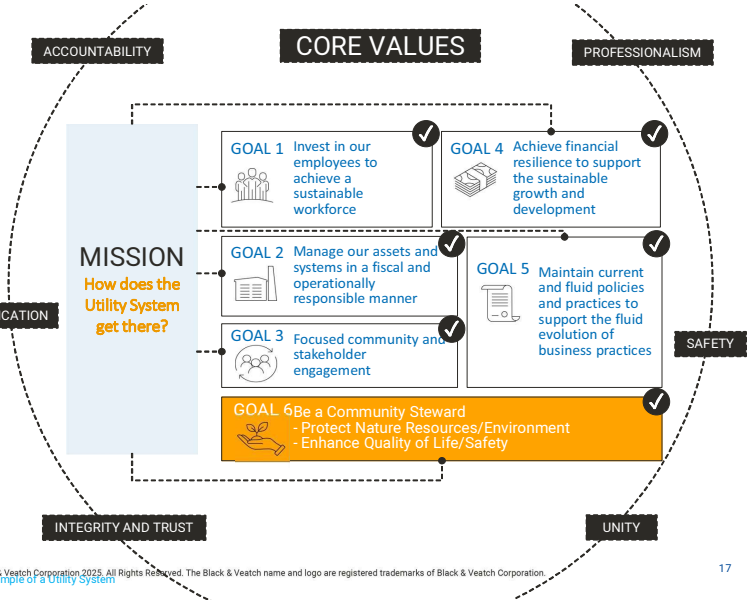
Mission – What are the day-to-day activities, rituals, and practices that must be undertaken?

KPIs – How can we align and cascade the performance of the Entity with the Strategic Plan?

Strategy Development Process



Utility System Strategic Plan



VISION
What does the Utility System want to become?

✓ *Objectives, Initiatives & KPIs*

Note: The information detailed herein serves as an example of a Utility System Strategic Plan

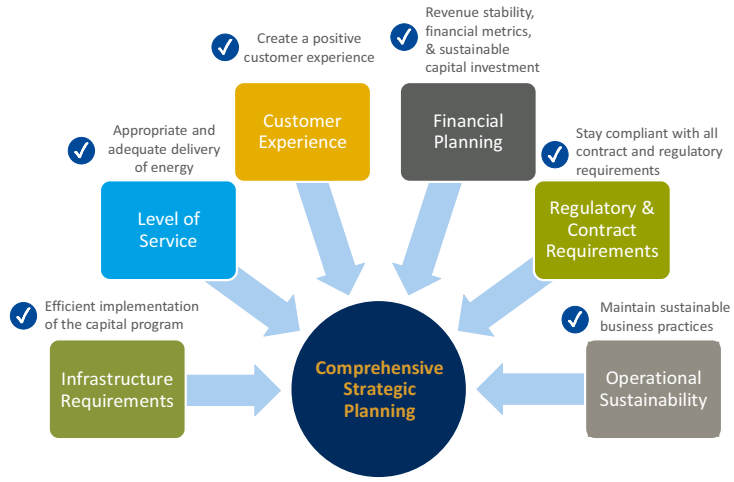
Accelerating Key Decisions

*Transitioning from a **single objective** to a **multi-objective** paradigm*

Single Objective

Sufficient supply to meet the demand for Utility Services

Multi-Objective/Competing Imperatives and Desired Outcomes



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Electric System Planning Highlights

Electric System Planning Highlights

Generation

- All Requirements System
  - Nature of Existing Service Agreement
- Flexibility in Generation
  - Flexibility Set Aside
- Impact of Renewable Generation on System
  - Solar/Shifting Peak Use
- System Impact of Adding Incremental Generation
  - Cost & Operations

Transmission & Distribution

- What is the existing nature of your T&D System?
  - System Integrity & Resilience
  - Adequate Capacity
- Alignment of Incremental T&D requirements
- Smart Grid
  - Multi-Directional Energy & Data
  - IT/OT Alignment

Stakeholder Engagement

- Demand Side Management
  - Energy Efficiency
  - Demand Response
- Customer Information and Education Process
- Procure Buy-in and Accountability from Staff
  - Operate with an Owner Perspective
- Significant Use Customers
  - Industrial/Special Services Customers
  - Data Centers

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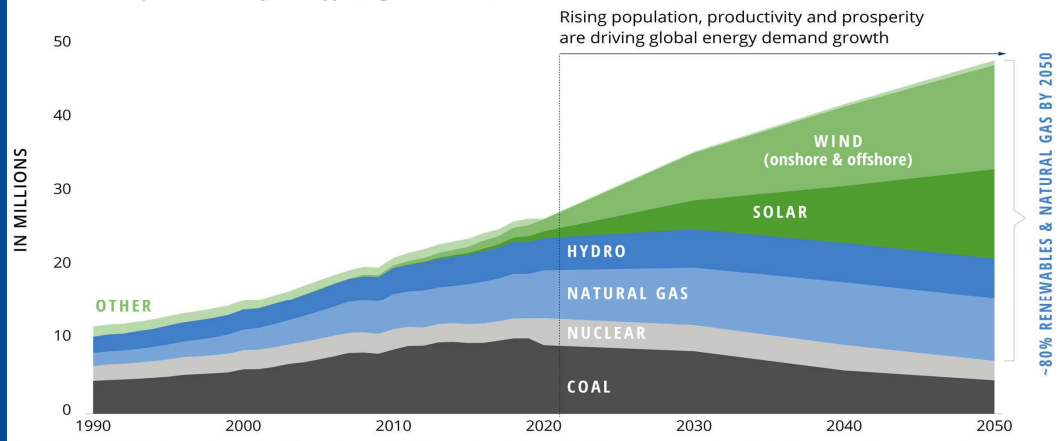
Electric System Planning Highlights – Future Generation

NATURAL GAS AND RENEWABLES ARE THE GLOBAL TREND

RENEWABLES AND NATURAL GAS TOGETHER ARE EXPECTED TO BE THE FUTURE OF POWER GENERATION

Global Electricity Production by Fuel Type (Gigawatt hours)



As of February 28, 2021. Source: International Energy Agency, World Energy Council. Forward-looking statements are hypothetical in nature and not guaranteed. See disclosures for additional information.

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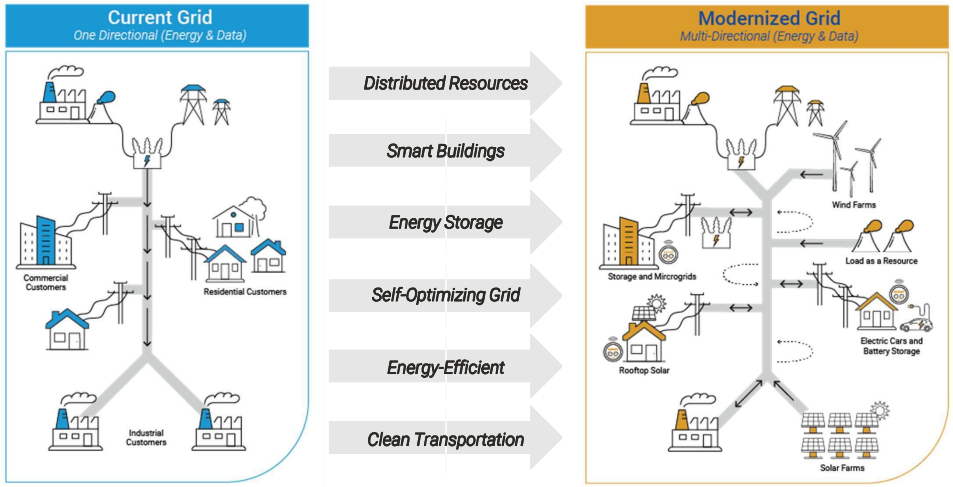
Electric System Planning Highlights – Smart Grid

Why Smart Grid?



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Electric System Planning Highlights – Demand Side Management

Demand Side Management (DSM) - Definitions

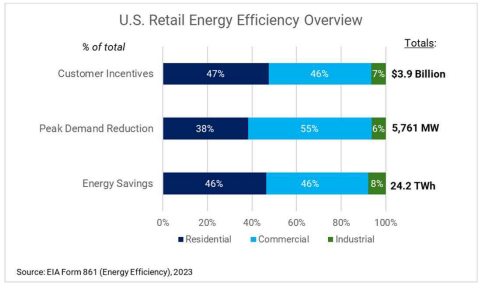
Utility Demand-side management (DSM) programs include planning, implementing, and monitoring activities designed to encourage consumers to modify their level and pattern of electricity usage (Source: Energy Information Administration)

Two types of DSM:

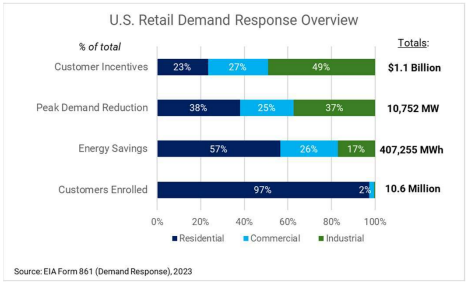
Energy Efficiency (EE)
Programs that shift or reduce consumer demand for energy by promoting energy-saving behaviors and technologies

Demand Response (DR)
Programs to shift energy demand at specific peak times to ensure grid or system capacity, reliability

EE/DR Size and Participation



EE savings in U.S. represent ~1% of overall demand-side energy consumption (MWh)



Peak demand reduction from all DR programs in the U.S. is ~9% annually (including wholesale market DR); however demand-side retail DR programs in U.S. represent 0.9% of overall demand-reduction (MW)

Successful Utility DSM Program Levers, Examples

Overview

Utility Lever	Examples	Description
Rates	Critical Peak Pricing	Very high prices during high peak system loads
	Time of Use	Higher prices during peak times of day
	Real Time Pricing	Variable prices at all times
	Inverted Pricing Blocks	Higher rate for high use customers
Incentives	Rebates on Bill	Debit on bill based on degree of behavior change
	Cash Compensation	Separate check to encourage behavior change
Information	Event Notification	Notification of a DR event underway
	Real Time Usage	Actual usage based on sensors
	Historical Usage	Consumption from to prior period
	Comparative Usage	Consumption compared to prior period or peers
Controls	Device-Specific Usage	Real-time usage at a device level
	Programmable Thermostats	Pre-set temperatures/times
	Smart Appliances/Plugs	Automatic on/off or settings
	Energy Automation, Control Systems	Software or systems to aggregate, view, and change usage from a mobile device or dashboard
	Distributed Energy Systems	Automated usage, storage, discharge of energy
Education	by Segment	Vary by consumption behavior, income
	by Channel	Vary by means (email, mobile app, bill inserts…)
	by Position	Vary by value (emissions reduction, increased savings…)
Insights, Verification	Verification of Program Benefits	Means to verify and report the specific benefits (savings, load reduction, behavior changes) achieved

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General Considerations

General Considerations

1. Understand and isolate where the Utility is on its development cycle (be intentional and practical).
2. Formulate a strategic direction that is tailored, aligned, and appropriately measured against existing business practices.
3. Communicate, Communicate, Communicate with Stakeholders.
4. Track, measure, and adjust key components, initiatives, and KPIs of the Strategic Plan against actual performance.

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Thank You