Coos County Transmission Action Plan & Cost Allocation Methodologies

Presentation to the NCTC

KEMA, Inc.

June 17, 2010

Agenda

- Introduction to KEMA
- Project Objectives
- Status of Work to Date
- FERC Role in Cost Allocation
- Guidance & Input from the NCTC
  - Benefits and Costs
  - Cost Allocation Ideas
- Input from Other Attendees
  - Benefits and Costs
  - Cost Allocation Ideas
- Cost Allocation Approach Review
- Summary Action Items

Agenda

- **Introduction to KEMA**
- Project Objectives
- Status of Work to Date
- FERC Role in Cost Allocation
- Guidance & Input from the NCTC
  - Benefits and Costs
  - Cost Allocation Ideas
- Input from Other Attendees
  - Benefits and Costs
  - Cost Allocation Ideas
- Cost Allocation Approach Review
- Summary Action Items

KEMA's Services and Customers

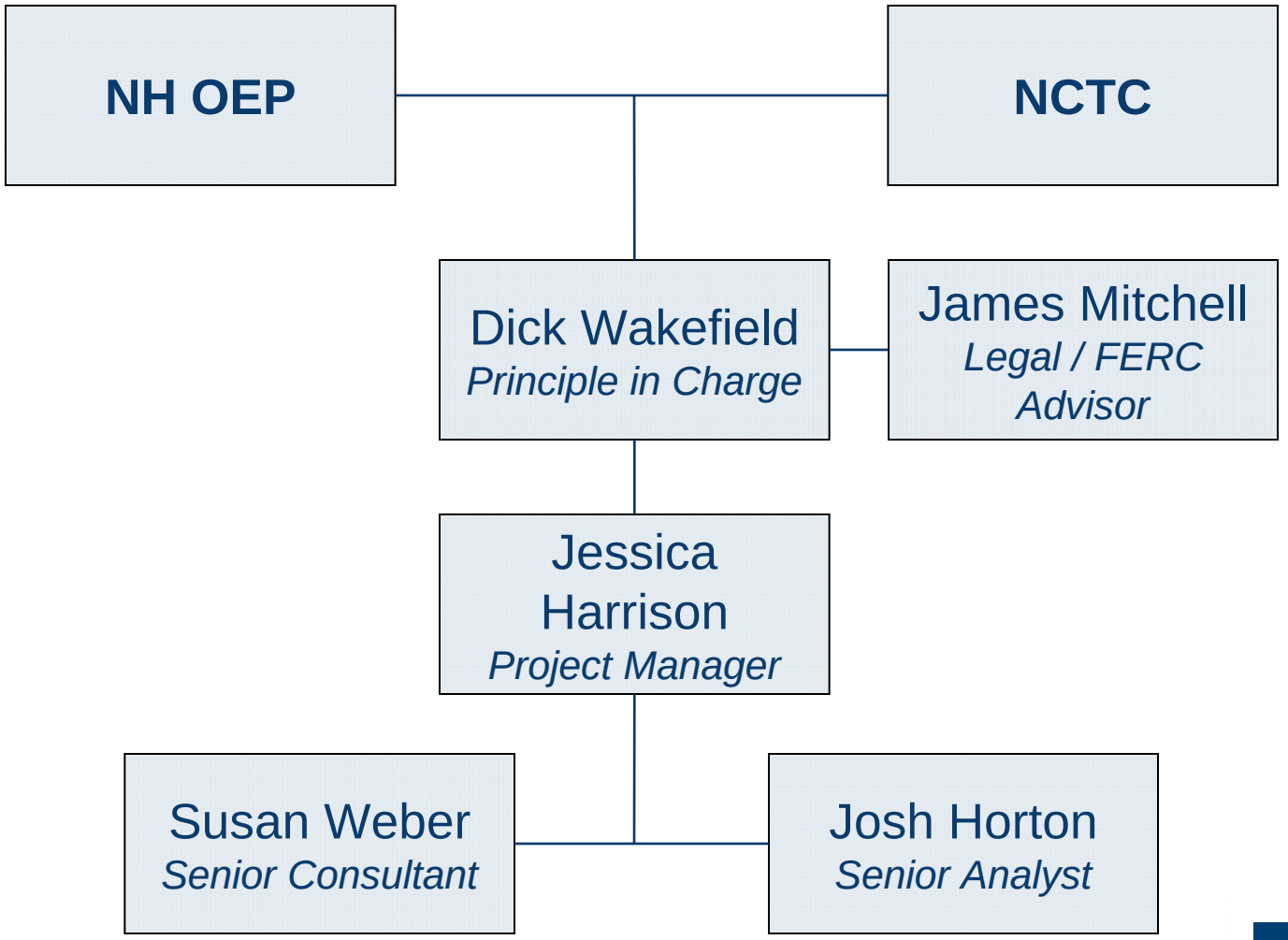
Our services

- Consulting services, technical & operational services
- Inspections, assessments, testing & certification
- Research & innovation

Our customers

- Energy supply industry
- Energy intensive users
- (Power equipment) manufacturers
- Transportation and public safety agencies
- Financial institutions and development banks
- Authorities and regulators

KEMA Project Team



Contact Information

Dick Wakefield
- RWakefield@KEMA.com
- 703.631.6912

Jessica Harrison
- JHarrison@KEMA.com
- 703.631.8493

Susan Weber
- SWeber@KEMA.com
- 781.418.5739

James Mitchell
- JamesMitchell@dwt.com
- 202.973.4200

Agenda

- Introduction to KEMA
- **Project Objectives**
- Status of Work to Date
- FERC Role in Cost Allocation
- Guidance & Input from the NCTC
  - Benefits and Costs
  - Cost Allocation Ideas
- Input from Other Attendees
  - Benefits and Costs
  - Cost Allocation Ideas
- Cost Allocation Approach Review
- Summary Action Items

Project Objectives

"To assist the New Hampshire Office of Energy and Planning and the North Country Transmission Commission to develop an action plan for expansion, upgrade, and/or replacement of the Coos County electric transmission line loop."

- Meet with stakeholders including:
  - NCTC, electric utility companies, legislators and other policymakers, Coos County Commission, ISO-NE, FERC, energy developers, energy generators and distributors, the general public, representatives of State agencies and other State officials, the consumer advocate, the North Country Council, and the Coos Economic Development Corporation
- Review challenges and opportunities regarding transmission cost allocation, and propose cost allocation solutions
  - Summarize how similar situations have been handled across the country
  - Look at Federal changes in legislation that may affect cost allocation

Project Objectives

- Review existing or develop financial studies and analyses

- Develop the framework of an action plan to pay for the upgrade of the transmission system in the North Country:
  - This framework should be based on the assumption that the transmission upgrades to integrate an additional 400 MW of new generation on the Coos Loop will cost $150 M. As a sensitivity, the framework should also explain how the suggested party's cost allocation would change if the upgrades were ten or twenty percent above or below this amount.

KEMA

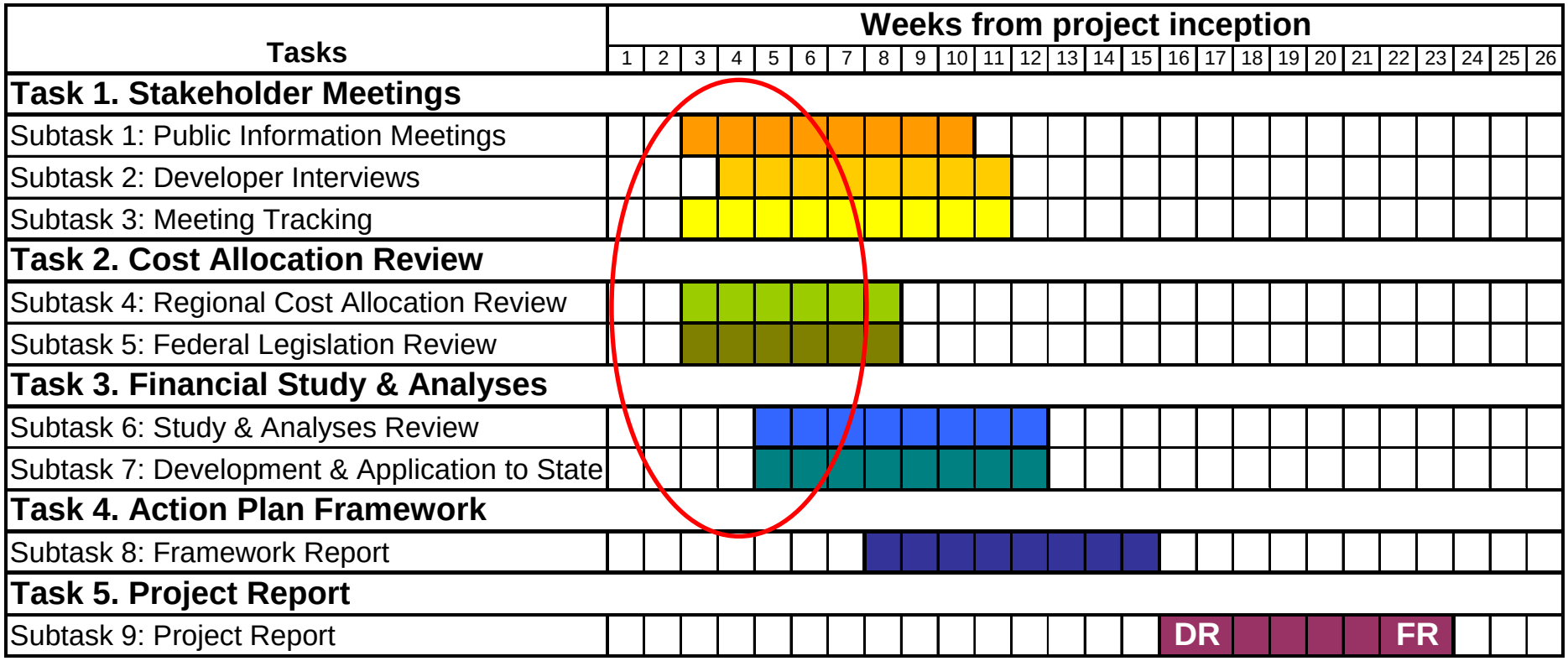
Agenda

- Introduction to KEMA
- Project Objectives
- **Status of Work to Date**
- FERC Role in Cost Allocation
- Guidance & Input from the NCTC
  - Benefits and Costs
  - Cost Allocation Ideas
- Input from Other Attendees
  - Benefits and Costs
  - Cost Allocation Ideas
- Cost Allocation Approach Review
- Summary Action Items

Project Objectives

- Task 1: Stakeholders Meetings
- Task 2: Cost Allocation Review
- Task 3: Financial Study & Analyses
- Task 4: Action Plan Framework
- Task 5: Project Report
- Task 6: ARRA-SEP Reporting

Status of Work to Date



Status of Work to Date

- ✓ Task 1: Stakeholders Meetings
  - Currently underway
- ✓ Task 2: Cost Allocation Review
  - Currently researching
- ✓ Task 3: Financial Study & Analyses
  - Currently researching; looking for additional recommendations on existing studies
- Task 4: Action Plan Framework
  - Will begin developing shortly
- Task 5: Project Report
  - Draft to be developed after stakeholder interviews, cost allocation review, and financial review
- Task 6: ARRA-SEP Reporting *(Continual)*

KEMA

Status of Work to Date

- Public Meeting
  - Purpose: To gather public input regarding proposed transmission line upgrades in New Hampshire's North Country and their associated costs and benefits.
  - June 24, 2010; 7:00-9:00 p.m.
  - White Mountains Regional High School
    127 Regional Road
    Whitefield, NH 03598
- Continuing individual stakeholder outreach
- Continuing research

Agenda

- Introduction to KEMA
- Project Objectives
- Status of Work to Date
- **FERC Role in Cost Allocation**
- Guidance & Input from the NCTC
  - Benefits and Costs
  - Cost Allocation Ideas
- Input from Other Attendees
  - Benefits and Costs
  - Cost Allocation Ideas
- Cost Allocation Approach Review
- Summary Action Items

FERC Role in Cost Allocation

OVERVIEW OF REGULATORY STRUCTURE

- Transmission of electric energy in interstate commerce is regulated by the Federal Energy Regulatory Commission (FERC).
- Federal Power Act requires all rates, charges, terms and conditions of transmission service to be just and reasonable and not unduly discriminatory or preferential.
- In 1996, FERC issued its Order No. 888, which requires all transmission owners to provide transmission service to all eligible customers on a non-discriminatory basis pursuant to a tariff on file at the FERC.
- In 1999, FERC issued its Order No. 2000, which encouraged utilities to transfer operational control over their transmission facilities to an independent Regional Transmission Organization (RTO) or Independent System Operator (ISO), which would provide transmission service on a region-wide basis.

KEMA

FERC Role in Cost Allocation

NEW ENGLAND INDEPENDENT SYSTEM OPERATOR (ISO-NE)

- ISO New England is a FERC-approved RTO with operational control over transmission facilities throughout the six New England states, including New Hampshire.
- Rates, terms and conditions of transmission service in New England are set forth in the Transmission, Markets and Services Tariff of ISO New England.
- Rates and charges are regulated by FERC, and are subject to modification:
  - By a rate change filing by ISO-New England or a local transmission owner, as appropriate.
  - By a complaint filed at the FERC showing that existing rates, terms and conditions of service are unjust, unreasonable, or unduly discriminatory.

KEMA

FERC Role in Cost Allocation

TWO TYPES OF TRANSMISSION FACILITIES IN NEW ENGLAND

- Pool Transmission Facilities
  - generally transmission facilities operating at 69 kv or above that help to integrate region-wide electric system.
  - costs of PTF are socialized and shared by transmission customers throughout New England.
- Local Transmission Facilities
  - transmission facilities that operate at lower voltages and generally function either as generation leads to deliver electricity from generation facilities to the grid, or to deliver electricity from the grid to serve local loads.
  - costs of local transmission facilities of each transmission owner are paid by transmission customers of the local transmission owner.
- Where a transmission customer takes service that involves use of both PTF and Local Transmission Facilities, it pays separate charges for each.

KEMA

FERC Role in Cost Allocation

FERC ALLOCATION POLICY

- Principle underlying allocation of transmission expansion costs is that the beneficiary should pay. FERC has used five approaches for allocating transmission expansion costs within regions served by RTOs:
  - **License plate**: costs of transmission lines are allocated to and recovered from customers of transmission owner where expansion was built.
  - **Postage stamp**: costs of new transmission lines are socialized and recovered uniformly from all transmission customers of RTO.
  - **Beneficiary pays**: costs are allocated among groups of customers based on perceived benefits accruing to each group
  - **Direct assignment**: costs allocated to entity requesting service for which expansion of the transmission system is needed.
  - **Merchant Transmission**: Merchant transmission company sells capacity through negotiated rates or competitive bidding process.

FERC Role in Cost Allocation

POTENTIAL BENEFITS TO BE CONSIDERED

- Reliability benefits: enhancement needed to meet regional reliability requirements.
- Economic benefits: enhancement facilitates coordinated operation of generating facilities and helps to reduce regional power production costs.
- Fuel diversity benefits: enhancement facilitates delivery of electricity from renewable energy resources in remote locations to regional load centers.

FERC Role in Cost Allocation

NON-TARIFF BASED COST ALLOCATION METHODS

- Merchant transmission lines:
  - Typically DC lines where power flows can be controlled.
  - Merchant transmission company must assume full market risk.
  - Competitive open season bidding process should be employed initially to allocate long-term transmission rights and costs. Revenues to power plant developer are based on results of the bidding process.
  - If transmission line is owned by an entity affiliated with a participant in energy markets, affiliate concerns must be addressed.
  - Generators may acquire transmission capacity for delivery of electricity to relatively high-cost import-constrained markets.

KEMA

FERC Role in Cost Allocation

NON-TARIFF BASED COST ALLOCATION METHODS

- Anchor tenant with open season:
  - Transmission line developer may enter into development agreement with “anchor tenant” under which a portion of proposed transmission capacity (up to 50%) will be pre-subscribed at negotiated rates before open season.
  - Remainder of planned transmission capacity will be sold in competitive open season auction.
  - Transmission rates are constrained by costs of expanding adjacent transmission systems.
  - Examples—Chinook and Zephyr lines for transmission of electricity from Montana and Wyoming to a point south of Las Vegas, NV.

KEMA

FERC Role in Cost Allocation

NON-TARIFF BASED COST ALLOCATION METHODS

- Participant funding with priority to transmission rights:
  - Capacity in planned transmission line pre-sold to generation facility owner on a long-term basis at cost-based rates to be established in the future.
  - If potential exists to expand the line, other customers should be given the right to acquire capacity at comparable rates, terms and conditions.
  - Transmission owner may be subject to traditional obligation to build new transmission capacity under tariff rules.
  - Example: transmission line proposed by Northeast Utilities and NSTAR Electric Company for import of electricity from Hydro-Quebec into southern NH.

KEMA

FERC Role in Cost Allocation

FERC IS OPEN TO INNOVATIVE TRANSMISSION PRICING

- "The Commission believes that merchant transmission projects…can play a useful role in expanding competitive generation alternatives for customers and meeting reliability needs." Montana Alberta Tie, Ltd, 116 FERC ¶ 61,071 (2006).
- "Renewable energy resources…are located in economically developable quantities at dispersed sites remote from load centers…[T]his order recognizes that merchant transmission projects may be particularly well suited to addressing the unique challenges associated with such location-constrained resources. Consumers will benefit from this evolution of the Commission's policy on merchant transmission because it will promote the expansion of our transmission grid's capacity and thereby enhance the development of our country's clean renewable energy potential." February 2009 Statement of FERC Chairman Wellinghoff regarding proposal by Chinook Power Transmission, LLC and Zephyr Power Transmission, LLC.

KEMA

FERC Role in Cost Allocation

FERC IS OPEN TO INNOVATIVE TRANSMISSION PRICING

- The Commission is committed to supporting the development of new transmission infrastructure that is essential not only to providing location-constrained resources with access to markets, but also to meeting our nation's current and future energy needs. As discussed more fully below, the Commission finds Petitioners' proposal to be an innovative approach that has the potential to advance these goals." SunZia Transmission LLC, 131 FERC ¶ 61,162 (2010).

KEMA

Agenda

- Introduction to KEMA
- Project Objectives
- Status of Work to Date
- FERC Role in Cost Allocation
- **Guidance & Input from the NCTC**
  - Benefits and Costs
  - Cost Allocation Ideas
- Input from Other Attendees
  - Benefits and Costs
  - Cost Allocation Ideas
- Cost Allocation Approach Review
- Summary Action Items

Guidance & Input from the NCTC

- Transmission Upgrade Benefits and Costs
- Cost Allocation Ideas

Agenda

- Introduction to KEMA
- Project Objectives
- Status of Work to Date
- FERC Role in Cost Allocation
- Guidance & Input from the NCTC
  - Benefits and Costs
  - Cost Allocation Ideas
- **Input from Other Attendees**
  - Benefits and Costs
  - Cost Allocation Ideas
- Cost Allocation Approach Review
- Summary Action Items

Guidance & Input from Other Attendees

- Transmission Upgrade Benefits and Costs
- Cost Allocation Ideas

Agenda

- Introduction to KEMA
- Project Objectives
- Status of Work to Date
- FERC Role in Cost Allocation
- Guidance & Input from the NCTC
  - Benefits and Costs
  - Cost Allocation Ideas
- Input from Other Attendees
  - Benefits and Costs
  - Cost Allocation Ideas
- **Cost Allocation Approach Review**
- Summary Action Items

Cost Allocation Approach Review

Five Approaches

- License Plate
  - costs allocated to and recovered from customers of transmission owner where expansion was built.
- Postage Stamp
  - costs socialized and recovered uniformly from all transmission customers.
- Beneficiary Pays
  - costs allocated among groups of customers based on perceived benefits accruing to each group
- Direct Assignment
  - costs allocated to entity requesting service for which expansion of the transmission system is needed.
- Merchant Cost Recover
  - Merchant transmission company sells capacity through negotiated rates or competitive bidding process.

Cost Allocation Approach Review

- *NOTE OPTIONS DISCUSSED TODAY*

Agenda

- Introduction to KEMA
- Project Objectives
- Status of Work to Date
- FERC Role in Cost Allocation
- Guidance & Input from the NCTC
  - Benefits and Costs
  - Cost Allocation Ideas
- Input from Other Attendees
  - Benefits and Costs
  - Cost Allocation Ideas
- Cost Allocation Approach Review
- **Summary Action Items**

Summary Action Items

- *NOTE ITEMS DISCUSSED TODAY*