



NARUC

Summer Committee Meetings

General Session

**Strategies for Expediting
Power Line Transmission
and Gas Pipeline Siting**



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Moderator: Hon. Ted Thomas, AR

Kristi Wise, Burns & McDonnell

James Nicholas, CH2M

Joan Dreskin, General Counsel INGAA

James Haggerty, USACE

Carl Zichella, NRDC



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**Kristi Wise,
Project Manager
Environmental Studies &
Permitting
Burns & McDonnell**

Transmission Line Routing Strategies

A Consultant's Perspective

NARUC Panel Presentation

July 14, 2015

Transmission Line Routing Goals

- ▶ Find an acceptable route:
 - Environmentally Acceptable
 - ▶ Minimize impacts to wetlands, protected species, streams, conservation easements, state/federal lands, and minimize permitting needs for these resources
 - Acceptable to the Public
 - ▶ Minimize impacts to homes, businesses, public facilities, parcels, cropland, cultural resources, visual, airports
 - Acceptable to Engineers
 - ▶ Cost (length, angles)
 - ▶ Schedule
 - ▶ Constructability / reliability / accessibility
 - ▶ Feasible
- ▶ Process needs to be effective, efficient, defensible (expect litigation)

BMcD Routing Process Objectives

- Involve both expert judgment and quantifiable analysis to minimize both subjectivity and bias
- Follow applicable state utility commission routing and reporting requirements to minimize the possibility of project rejection
- Anticipate issues and concerns and address them proactively to minimize cost and schedule overruns
- Build, maintain and manage relationships with property owners, local communities, abutting property owners, civic leaders, business leaders, neighborhood associations and other stakeholders for the entire life of the project
 - ▶ Early and often communication with key stakeholders
 - ▶ Incorporate public comments and feedback into the route identification, analysis, and route selection, when feasible
- Identify routes that preserve the natural landscape and minimize conflict with present and planned uses to the extent practicable, while also considering engineering concerns

Transmission Line Routing Process

▶ Gather GIS and Other Data

- Parcels, land use and land cover, existing utilities, federal, state and local lands, airports, cultural resources, development, roads, wetlands, streams, protected species habitat, irrigation systems, soils, terrain, etc.
- Identify, classify, and map constraints
 - ▶ Prohibitive, Restrictive, Prudent

▶ Contact Agencies / Community Leaders for Notification and Input

▶ Identify Preliminary Routes

- Pathways that avoid as many constraints as possible
- Identify constrained areas / hot spots
- Identify other corridors to parallel / co-locate
- Reasonable number of alternatives
- Manual / Least Cost Path both used

Transmission Line Routing Process, cont.

- ▶ Field review routes along public roads, possibly also by helicopter
- ▶ Hold public open houses to gather public input
 - Study area
 - Preliminary routes
 - Selected routes
 - Make adjustments to routes based on input at each stage, if feasible
 - Become aware of possible legal challenges early in process / address proactively
- ▶ Evaluate routes
 - Select key differentiating factors (length, length parallel to existing transmission lines, houses within 300 feet, wetlands crossed, etc.)
 - Quantify potential route impacts
 - Develop impact scores to use to compare routes (defensible)
 - Incorporate landowner input into evaluation weights / intangible considerations
 - Select preferred/alternate routes to file with utility commission

Transmission Line Routing Process, cont.

- ▶ Prepare routing study report and application for utility commission
 - All states differ in some ways as to requirements for CCN (none to complex)
 - We recommend standard process even without CCN to support eminent domain and other possible litigation
- ▶ Testify
 - Defensible process
 - ▶ Third party independent of utility
 - ▶ Low subjectivity
 - ▶ Prepare complete analysis and report, having addressed all possible impacts

EPA 111b/d and Clean Water Rule Implications

- ▶ EPA 111b/d (Clean Power Plan) = more transmission, more renewables
- ▶ Clean Water Rule = potentially more permitting uncertainty
- ▶ Combined, these two proposed regulations could create a perfect storm where new construction is needed, but can't get permitted on time
 - Anticipated wetland impacts can be determined early and avoided, but ambiguity in what is/is not a jurisdictional wetland can increase permitting costs and time to get permits
 - Increase in what is jurisdictional could result in fewer projects within NWP limits, more IP's (more time, more money)
- ▶ Strategies for minimizing delays?
 - Amend/implement the rule with little ambiguity so potential impacts can be avoided early in process (i.e. during routing), rather than during permitting phase
 - Increase NWP limits if more waters are considered jurisdictional



CREATE AMAZING.



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**James Nicholas,
Electric Transmission Siting &
Permitting Program Mngr.
CH2M**

Optimizing Siting and Permitting of Electric and Gas Transmission

July 2015

ch2m.SM

Actors in Transmission Siting and Permitting

Who Can Affect the Schedule?

- Applicant
- Consultant
- Regulator
 - State PUC, RTO
- Permitting Agency/Consulting Agencies
 - Corps, State EPA, FWS, SHPO, Tribes,
- Public/NGO's

Optimizing Siting and Permitting of Electric and Natural Gas Transmission

• Major Time Sinks

- Route Selection
- Fieldwork
- Permitting
 - Local (relatively short)
 - State (PUC Processes 12-18 mts)
 - Tribal
 - Federal/NEPA
- Public Involvement
- ROW Acquisition/Condemnation
- Design
- Construction

Ballpark Timing for Typical

3-6 months

1-4 months

8-36 months

< 1 yr

1-2 yr

?

12-24 months

In parallel with NEPA/PUV

Highly variable

6-12 months

18-24 months

What Can the Consultant Influence/Control

Frame The Siting Study

Define Study Area

Decide on & Collect Data

Develop Constraint Map
& Decision Criteria

Develop Candidate
Corridors

Siting Team
Meets and
Places
Centerlines

Windshield Survey to
Verify/Adjust

Develop Scoring Criteria

Score and Rank Routes

Apply Qualitative Criteria

Public Input

Siting Team
Meeting
Selection
Decision

- **Have a robust and useful siting/routing process –**
 - minimize permitting through avoidance/minimization
 - Limit land owner's crossed to minimize ROW acquisition logistics
 - Use CRM knowledge to avoid high probability cultural areas
 - and potential land-owner and agency intervention
- **Know the state and local permitting rules**
 - Understand the hot button issues, design siting to account for them
- **Programmatic solutions with agencies –**
 - Offer and implement programmatic solutions with agencies e.g. SHPO's for certain kinds of projects
- **Accurate, complete, high quality work**
 - Limits re-do and review cycles

What the Applicant/Developer can Control

- **Work out the details of the project as soon as possible and minimize changes (especially large & late changes)**
 - Late changes = amendments, additional filings, fieldwork, reports, reviews, more public notices and meetings
- **Early feasibility – initial routing, permit assessment, schedule –**
 - have a good idea of what you will be facing, provides a basis for better RFPs for construction related bids etc.
- **Engage with agencies and consultants early, a team approach works very well**
 - No surprises, tell them its coming, find out the hot issues
 - This is likely not your only project in the area, think past the current project & built relationships and trust
- **Fund the project through to completion**
 - Sudden stops and starts kill momentum, sap agency good will, and often require significant rework
- **Fund additional review positions at state agencies (has been tried and works well)**
 - Some state agencies severely underfunded yet have heavy review workload. Utilities have provided funding for additional reviewers

Agency Considerations

- **Regulators**

- State PUC – Refine the process, provide comment windows
- ISO/RTO Solicitations –
 - Allow adequate time for the Applicant to prepare complete, sound responses
 - Efficient, review and selection procedure

- **Permitting Agencies/Consulting Agencies**

- Have a clear process, designate a project manager, consider a multi-agency permitting coordinator. Coordinate efforts between agencies to avoid duplication of effort.
- Work with the Applicant on useful programmatic agreements
- Do not require superfluous or excess studies
- Conduct timely, reasonable reviews, stick to statutory review times
- Communicate with the applicant, if information is missing or additional is required, ask informally rather than restarting the review clock
- Be clear about expectations and reasonable about the need for and scope of mitigation or compensatory requirements
- Consider practical compliance issues when developing rules/regulations

Geographic Variability in Transmission Siting & Permitting

- **Siting & Permitting of Transmission Varies Significantly Geographically:**

- There is no overall permitting/licensing authority to backstop the process
- Presence of Federal Land (denser in the west than mid-west and east)
- Tribal Issues - West and Southwest > East
- Variability across Climate/Bio-zones
- Scale and Distance
- Development density
- State PUC/No State PUC
- State Specific Agency Rules (e.g. wetlands)
- Local Sensitivities/hot buttons
- Specific T&E Species

- **General Observations**

- Siting in the west is dominated by BLM and other Federal/Tribal processes and concerns
- Siting in the east is much less dominated by NEPA, more likely State PUC, Wetlands, dense development and T&E species driven.
- Circles back to siting, it must be flexible
- Condemnation rights (often based on successful issuance of a “certificate” or similar permit) are critically important in maintaining a reasonable timeframe.

Polled Several Colleagues and Clients

- Strong sense that a robust state process for siting and approving transmission lines is a distinct advantage.
 - Predictability and a known framework within which the permitting agencies and public get to participate is key.
 - States know their applicants, agencies and public well and tailor the approval process to that.
- Much less enthusiasm for a federal FERC type process – perception that this would end up being more of an onerous “process” than a useful framework for optimizing siting and permitting
- Pre-approved Energy Corridors/Designated routes?
- Applicants have to account for multiple stakeholder concerns
 - Each stake holder is operating according to their statutory self interest –
 - outcome is therefore ALWAYS a compromise, never perfect
 - Sometimes getting opposing stakeholders/agencies together fosters understanding and flexibility
- Consultants help applicants navigate through a series of competing priorities and interests to find a useful and workable solution. “A good consultant is good at balancing priorities”.

THANK YOU

James Nicholas

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**Joan Dreskin,
General Counsel
Interstate Natural Gas Assn.
of America**



Pipelines Make It Possible

NARUC Summer Committee Meetings

July 15, 2015

Joan Dreskin

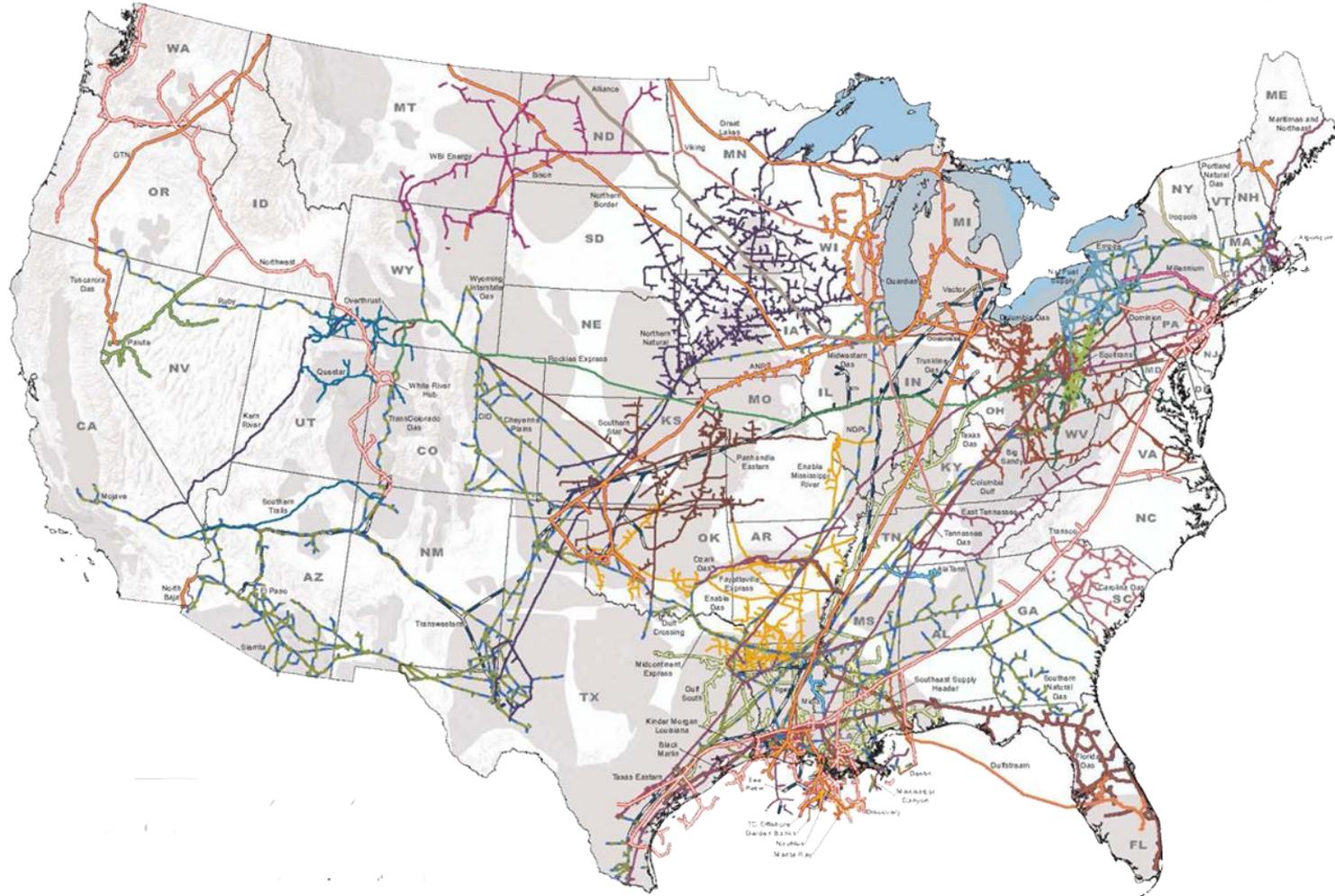
INGAA



What is the Interstate Natural Gas Association of America?

- INGAA is a trade organization that advocates regulatory and legislative positions of importance to the natural gas pipeline industry in North America.
- INGAA is comprised of 25 members, representing the majority of major interstate natural gas transmission pipeline companies in the U.S. and comparable companies in Canada.
- INGAA's members operate approximately 200,000 miles of pipelines, and serve as an indispensable link between natural gas producers and consumers.

U.S. Natural Gas Transmission Pipelines: A Robust Infrastructure



Source: Interstate Natural Gas Association of America, Pennwell MapSearch

FERC: Interstate Natural Gas Pipelines' Economic Federal Regulator



- Reviews and approves pipeline rates and services
- Approves the location, construction and operation of pipelines and storage facilities
- Has exclusive siting authority—does not preempt other required federal or state authorizations
- Lead agency for NEPA review and coordinates all federal authorizations
- Establishes a schedule for all federal authorizations:
 - Ensures expeditious processing of all natural gas project permits and authorizations
 - Federal authorization decisions to be issued within 90 days of FERC's final NEPA document
 - Yet, EPO Act 2005 did not provide FERC authority to enforce its schedule
- A FERC certificate grants a pipeline eminent domain authority, but a pipeline uses this authority prudently

The Interstate Natural Gas Pipeline Model Works

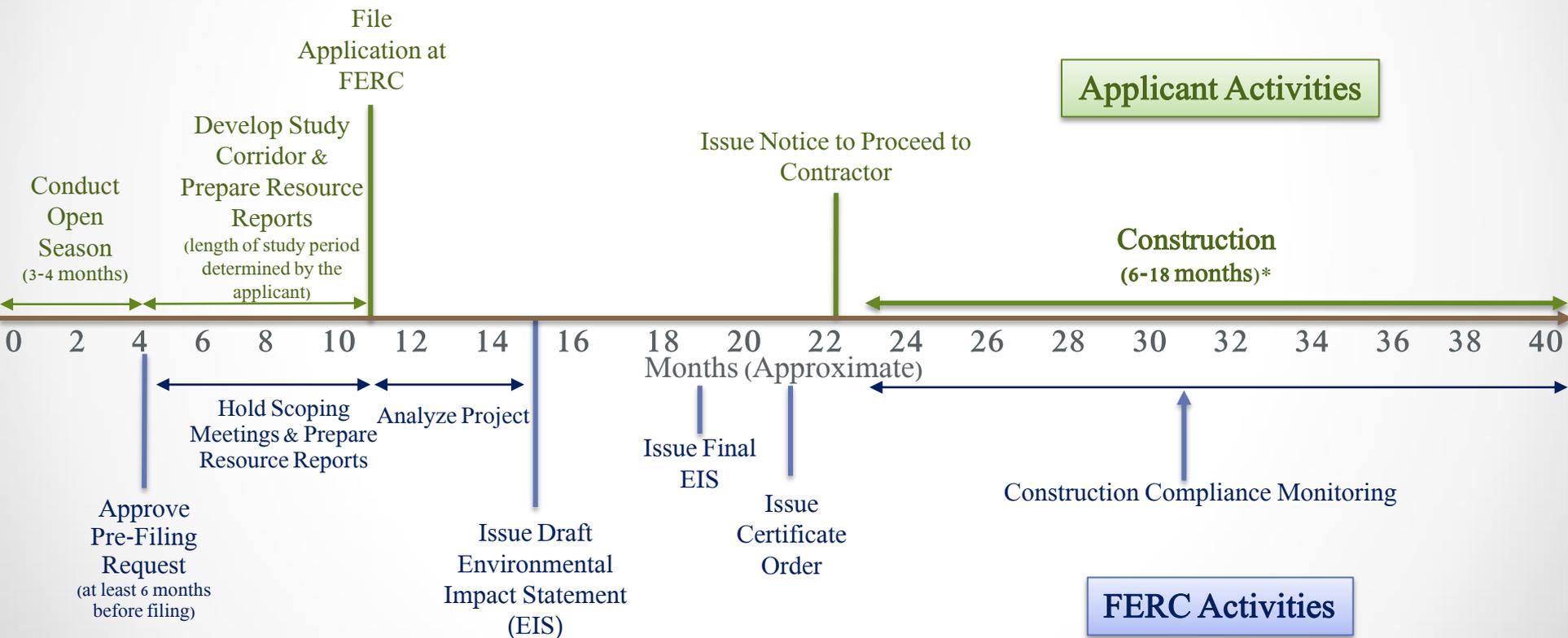
- Pipelines transport, but do not sell, gas
- Open access transportation and storage
- Pipelines compete for market opportunities
- Pipelines build based on firm contracts, not on speculation
- Pipelines build on incremental rates, no cross subsidization
- Pipelines typically are designed with little or no excess capacity
- Customers ensure reliability individually by taking responsibility for a portfolio of natural gas services that meets their needs

Pipeline Authorization & Construction

From Project Inception to Pipeline Construction



The INGAA
Foundation, Inc.



*Timeline varies by project

Timely and Predictable Pipeline Certification Is Paramount



EPA's Clean Power Plan Raises Concerns about the Timing of Infrastructure Development

- Generators or electric utilities will not know until 2017 or 2018, at the earliest, whether they will contract for pipeline capacity and, importantly, for how much.
- The Proposed Power Plan raises practical concerns whether the pipeline industry physically can construct needed pipeline infrastructure by 2020.



Contact Information

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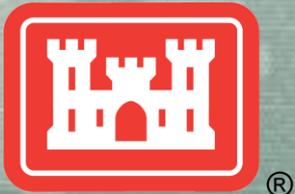
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**James Haggerty,
Regulatory Program Mngr.
North Atlantic Division
US Army Corp. of Engineers**

U.S. Army Corps of Engineers

Regulatory Overview For Utility Line Activities



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Regulatory Program Mission

To protect the Nation's aquatic resources, while allowing reasonable development through fair and balanced permit decisions.

The Corps is mandated by law to protect the aquatic environment by requiring a permit for virtually all physical impacts to the Nation's waters, including coastal waters, all open waters, and wetlands.

The Corps' goal in administering its regulatory mission is to make timely, fair, and reasonable decisions.



Corps Regulatory Authorities

- Section 10 Rivers and Harbors Act of 1899
 - Structures/work in, over, or under Navigable Waters or affecting the course, location, or condition of Navigable Waters

- Section 404 Clean Water Act
 - Discharges of Dredged or Fill Material into Waters of the United States

- Section 103 of the Marine Protection, Research and Sanctuaries Act
 - Regulate transport of dredged material for the purpose of ocean disposal



Types of Authorizations

- General Permits:
 - ▶ Have minimal impacts individually and cumulatively
 - ▶ Compliance with most laws and regulations occurs during development of permit, not permit verification
 - ▶ Nationwide Permits (NWPs)
 - ▶ Regional General Permits (RGPs)
 - ▶ State Programmatic General Permit (SPGPs)



Types of Authorizations (cont'd)

- Individual Permits
 - ▶ Letters of Permission (LOPs)
 - Not controversial
 - No public notice
 - ▶ Standard Individual Permits (SIPs aka IPs)
 - Complex, can be controversial
 - Can require District Commander involvement
 - ▶ Compliance with laws and regulations occurs during a case-specific analysis



Nationwide Permit #12 Utility Lines

- Construction, maintenance, or repair of utility lines, substations, access roads, etc.
- ½ acre of total loss of waters of the U.S. (impacts such as conversion to different wetland types and temporary impacts that are fully restored do not constitute loss)
- Single and complete crossings of waters



NWP #12 - Reporting

- Required When:
 - ▶ activity involves mechanized land clearing in a forested wetland for the utility line right-of way;
 - ▶ a Section 10 permit is required;
 - ▶ the utility line in waters of the United States, excluding overhead lines, exceeds 500 feet;
 - ▶ the utility line is placed within a jurisdictional area (i.e., water of the United States), and it runs parallel to or along a stream bed that is within that jurisdictional area;

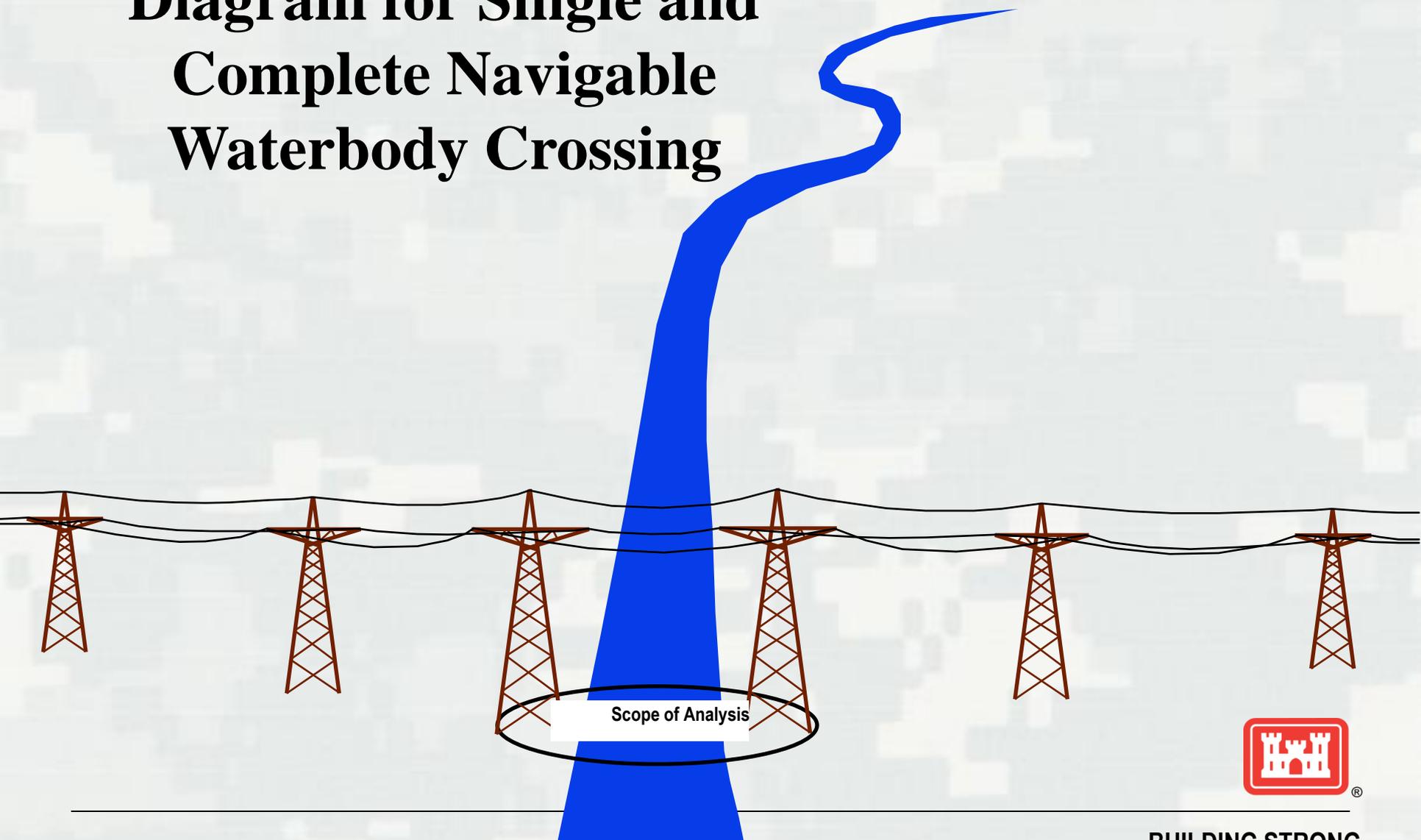


NWP #12 – Reporting (cont'd)

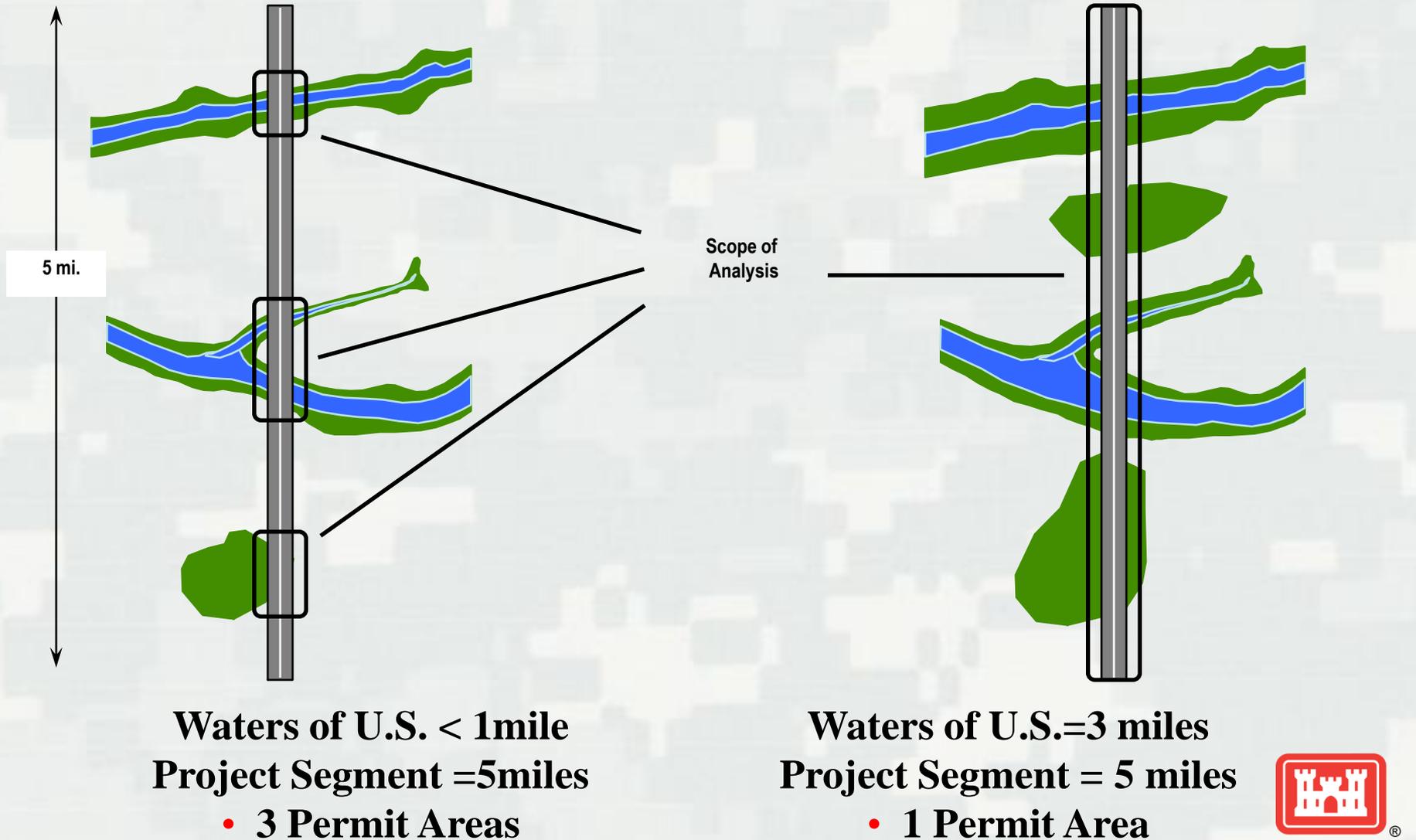
- Required When:
 - ▶ discharges occur that result in the loss of greater than 0.1-acre of waters of the United States;
 - ▶ permanent access roads are constructed above grade in waters of the United States for a distance of more than 500 feet; or
 - ▶ permanent access roads are constructed in waters of the United States with impervious materials
 - ▶ NOTE: many districts have imposed additional reporting requirements in certain situations—check with the appropriate district(s)



Schematic Scope of Analysis Diagram for Single and Complete Navigable Waterbody Crossing



Scope of Analysis for Multiple Linear Project Crossings



Individual Permits

- Public Notice
- National Environmental Policy Act
- Public Interest Review
- Clean Water Act Section 404(b)(1) Guidelines*
- Other Laws and Regulations

* If applicable (i.e. discharge of fill)



Keys to Timely Decisions

- **Understand and comply with USACE information requirements**
- **Respond to questions/comments/info requests in a timely manner**
- **Closely engage with USACE even when we are not the lead federal agency (do not wait until lead agency makes a decision!)**
- **If you are ever unsure about what's required or why, please ask**



Other - Section 408

- Modification or alteration of a Corps project (e.g. levees, navigation channels, etc).
- Managed by other business lines within the agency
- Regulatory will not render a permit decision unless/until a Section 408 permission is granted



Questions





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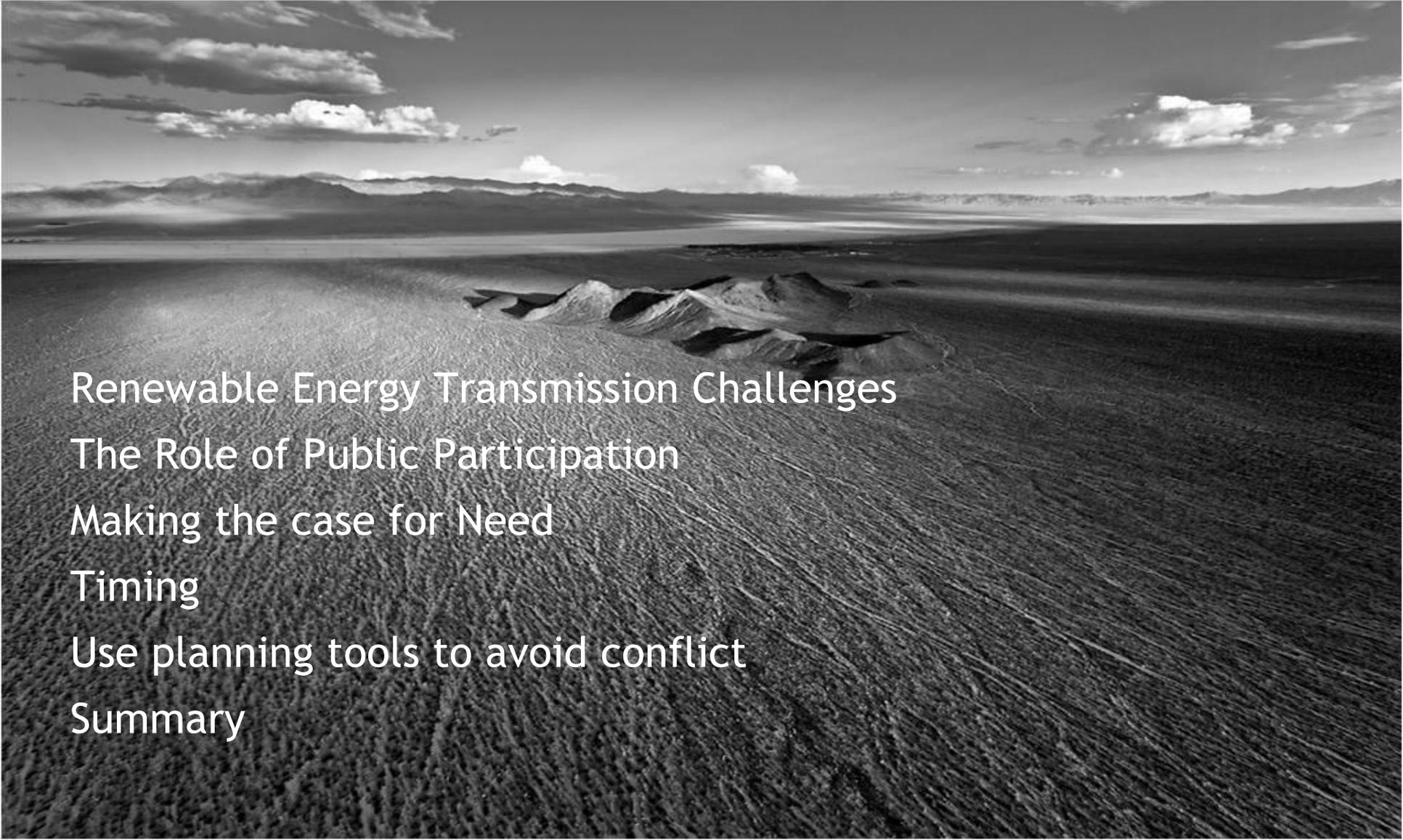
**Carl Zichella,
Director of Regional
Transmission, NRDC**

Expediting Renewable Transmission



NARUC Winter Meeting, New York City
CARL ZICHELLA
DIRECTOR OF REGIONAL TRANSMISSION
NRDC
JULY 15, 2015

Presentation Overview



Renewable Energy Transmission Challenges
The Role of Public Participation
Making the case for Need
Timing
Use planning tools to avoid conflict
Summary

Renewable Transmission Challenges

Remotely constrained

Lengthy transmission

Fragmented Transmission Authorities

Generation v. Transmission Time Horizons

Public v. Private Lands

ROW's are precious and difficult to create



Environmental Priorities

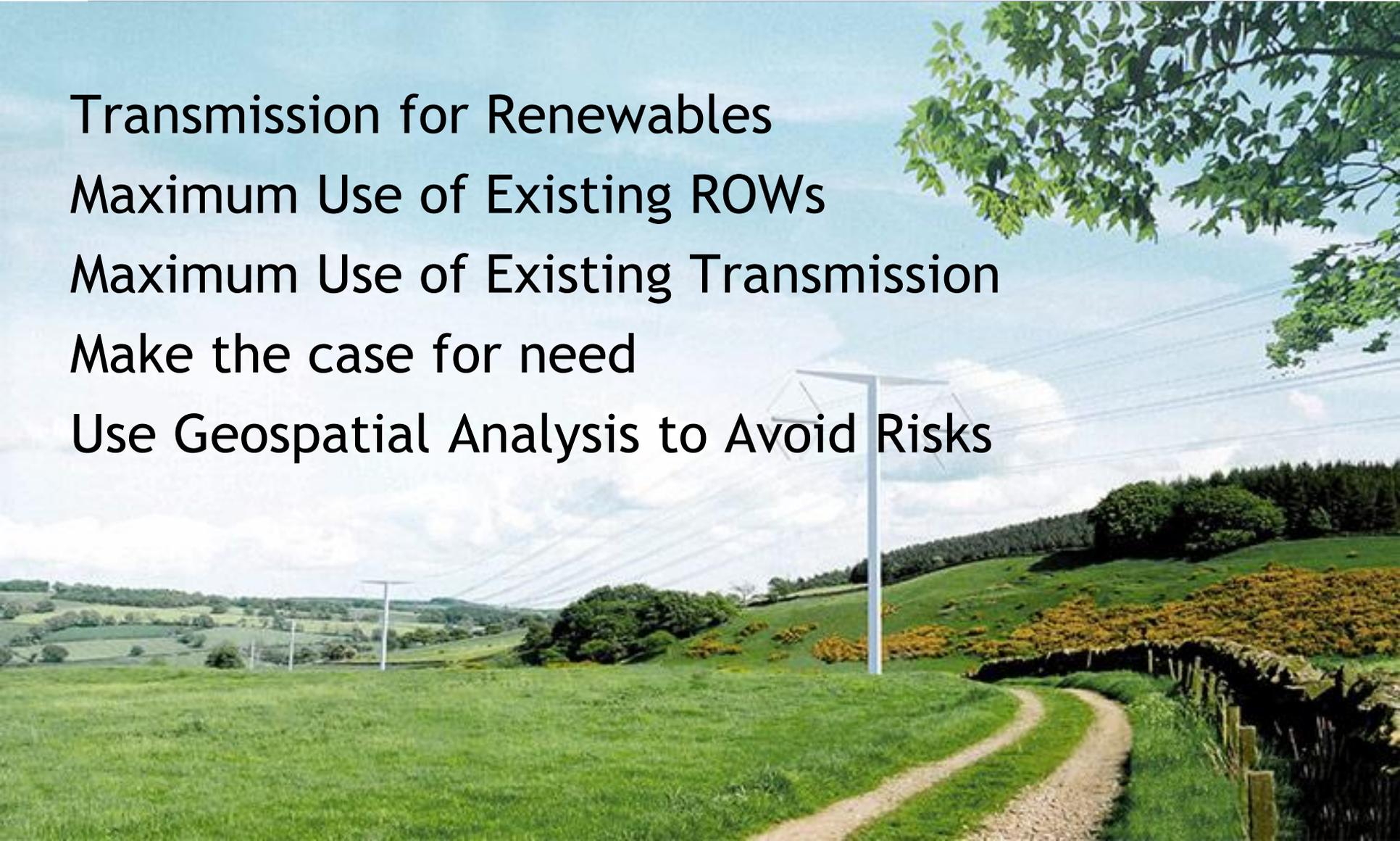
Transmission for Renewables

Maximum Use of Existing ROWs

Maximum Use of Existing Transmission

Make the case for need

Use Geospatial Analysis to Avoid Risks



Making the Case for Need

- System analytics
 - Congestion
 - Reliability
 - System utilization
 - Non-wires analysis
 - Responsive to policy goals
 - RPS
 - Clean Power Plan compliance
- 
- An aerial photograph of a vast, arid desert landscape. The terrain is characterized by deep, winding canyons and a network of dry, branching watercourses. In the background, a range of rugged mountains stretches across the horizon under a clear, pale blue sky. The overall scene conveys a sense of isolation and the harshness of the environment.

Role of Public Participation

Help Avoid Stakeholder Conflict

Accelerate Low Carbon Res. Penetration

Help Identify Fatal Flaws for Projects

Find Solutions to Routing and Siting

- Provide meaningful comparisons between alternatives and help guide choices

Build Support for Solutions within Classes of Stakeholders

Timing Issues – Start Early

Classic Planning:

- Lay out route, submit for Environmental Review, Consult Public

Smart From the Start Planning:

- Consult key stakeholders early
- Use feedback to inform routing decisions
- Open and Transparent throughout
- Avoids risk of environmental and cultural conflicts

Early Consults Help Reduce Conflict

Numerous projects now practice Smart from the Start Planning to avoid conflicts

- Transwest Express
- Zephyr
- Sun Zia
- Gates to Gregg (California)

Planning tools to avoid conflict

3

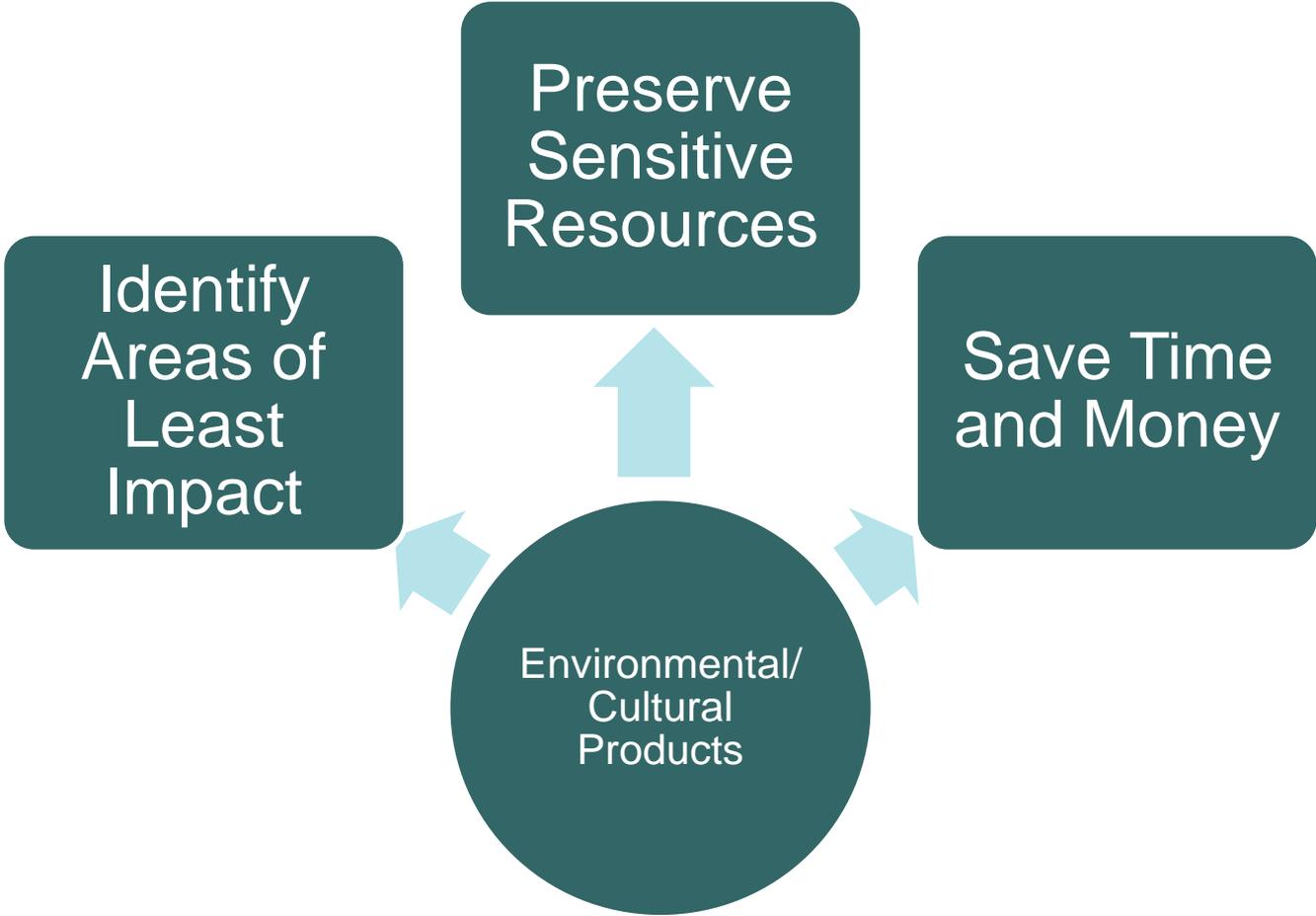
What Are “Risk Classifications?”

	Risk Classification Categories	Example Area Types
	CATEGORY 1	Existing Transmission Rights-of-Way Designated Energy Corridors
	CATEGORY 2	Army Corps of Engineers Lands Other Public Lands
	CATEGORY 3	Critical Habitats National Monuments National Recreation Areas
	CATEGORY 4	Wilderness Areas National Parks Wildlife Refuges
		

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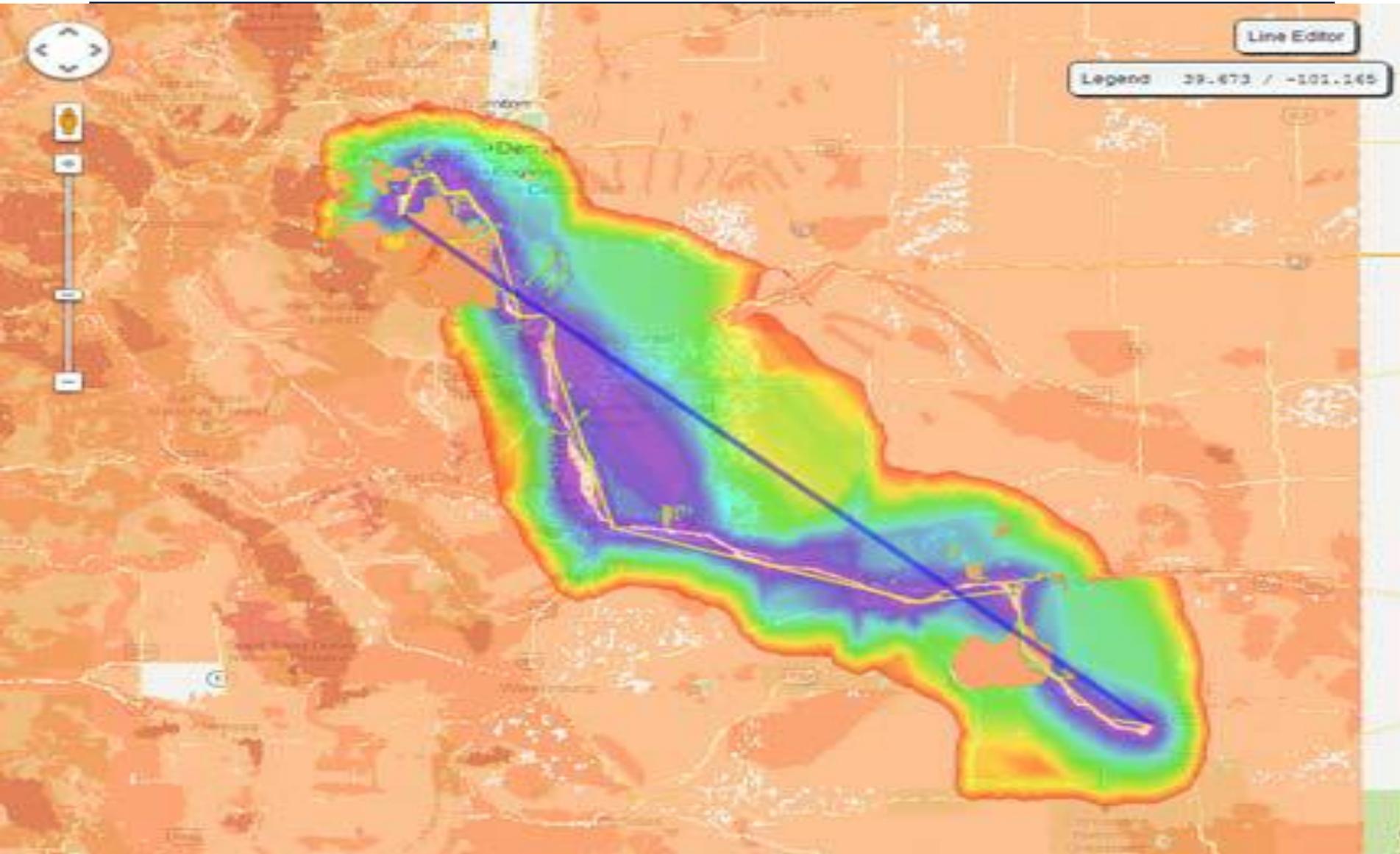


Using Environmental/Cultural Data



////////////////////////////////////

Bending (Optimizing) the lines



Summary

An aerial photograph of a vast, arid landscape, likely a desert or plateau. The terrain is characterized by rolling hills and valleys, with a grid of land parcels overlaid in a light brown color. In the background, a range of mountains stretches across the horizon under a clear blue sky. The overall scene is one of a large-scale, open landscape.

Understand Project Challenges
Utilize formal and informal public outreach
Make the case for need
Start as early as possible
Use planning tools to avoid conflict



QUESTIONS

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