RAPID Toolkit

Project Overview

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2015
Background

• Industry stakeholders – from multiple industries – have identified the permitting process as one of the most significant barriers to transmission and power project development.

• Potential bottlenecks in the permitting process increase the cost and financial risk of a project. The impact of a single permitting delay may be small, but the cumulative impact of multiple, often independent, and sometimes conflicting regulations on development projects can hinder new projects or make them non-commercial.
White House Initiatives

White House Executive Order (March 22, 2012) -- Improving Performance of Federal Permitting and Review of Infrastructure Projects


White House Report (May 2013) -- Rebuilding America’s Infrastructure: Cutting Timelines and Improving Outcomes for Federal Permitting and Review of Infrastructure Projects

Presidential Memorandum (June 7, 2013) -- Transforming our Nation’s Electric Grid Through Improved Siting, Permitting, and Review

White House Fact Sheet (May 14, 2014) -- Building a 21st Century Infrastructure: Modernizing Infrastructure Permitting

White House Implementation Plan (May 2014) -- Implementation Plan for the Presidential Memorandum on Modernizing Infrastructure Permitting Steering Committee on Federal Infrastructure Permitting and Review Process Improvement
Objectives

• To develop the permitting roadmap and related tools for power and bulk transmission projects at the federal and state levels to understand what the current process looks like

• To convene industry stakeholders, both agencies and industry, involved in the permitting process to validate the process

• To work with all stakeholders to optimize and streamline the regulatory process to the benefit of all

• To provide links to permits, processes, guidance, manuals, examples, regulations, rules, contacts, and other relevant information so that it is rapidly accessible to users from one location

• To facilitate communication between project developers and agency personnel, among agencies at all jurisdictional levels, and among all project stakeholders – including the public.

Agencies are very good at what they do, but aren’t always aware of what other agencies do. RAPID brings agencies together on the same page.
Project History

2010
Collect data on geothermal permits

2011
Permitting Checklist incorporated into Geothermal Regulatory Roadmap (GRR); moves to OpenEI platform
Roadmap federal regulations and 8 states; vet with agencies

TetraTech for Western Governors’ Association

Develop online geothermal Developers’ Checklist on NREL domain – organized by state and by topic

2012
Conduct permitting information needs assessment for bulk transmission

Develop Permitting Atlas for bulk transmission

2013
Roadmap 2 additional states; conduct 3 permitting analyses; upgrade interface; develop NEPA Database

Expand GRR and Atlas into RAPID Toolkit; conduct 2 permitting analyses; roadmap 2 geothermal states; add solar federal and CA roadmaps; add bulk transmission roadmaps

2014
RAPID website: usability, buy in, sustainability
geothermal: analysis and streamlining;
solar: roadmap NV; state outreach
transmission: outreach, NEPA database, best practices
hydro: outreach, federal roadmapping

2015
Project History

5 | National Renewable Energy Laboratory
en.openei.org/wiki/RAPID
Feedback

“Flowchart detail and layout are very good, but the number of flowcharts is overwhelming. Developing into a web application would improve usability, particularly if it’s used to track schedules and accountability.” (industry)

“I learned new things coming to these meetings – every project teaches me something new.” (industry)

“It was great meeting with other agencies to understand their processes and priorities.” (industry)

“Flowcharts are very clear and accurate. Process end-product will add value to a variety of audiences.” (agency)

“It would be great to have these developed for other renewables, too!” (industry, agencies)

“Please get this website out to as many agencies as possible for them to link directly to your websites – it’s a great tool!” (agency)

“I can’t wait to use these flowcharts to train my newer employees!” (multiple agencies)

“Keep up the momentum to see and cross the finish line – really need this tool!” (industry)

“The objective of creating this ‘roadmap’ is absolutely necessary. I would encourage you to continue the project.” (industry)

“For more on what people are saying, see the RAPID website
Benefits

- Enhance transparency and understanding by all stakeholders involved in the permitting process
- Facilitate communication among agencies
- Save agencies time in explaining permitting process to industry and to its own personnel
- Help in training new staff and in documenting procedures
- Help to provide consistency among an agency's multiple offices
- Serve as a model for jurisdictions that have yet to develop permitting regulations
- Provide an online forum for maintaining and communicating permitting processes and for making documents available
- Provide the data and background analysis needed to inform policymakers and stakeholders in developing new regulations, policies, and rules
- Provide service to agencies in times of continually decreasing budgets
- Decrease project risk by reducing delays and costs and eliminating uncertainties
- Provide greater assurance to stakeholders that the project will be conducted in a technically, environmentally, and socially responsible fashion.

"The single biggest problem in communication is the illusion that it has taken place."
- George Bernard Shaw
**Toolkit Overview**

- Collection of publicly available information about permits and regulations that is rapidly accessible to users from one location.

- Currently focused on bulk transmission and power project development.

- Four tools in development in FY14; additional tools will potentially be added in the future.

- Success depends on contributions and maintenance by all stakeholders.

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**Reference Library**
A collection of links to regulatory and permitting documents, regulations, and tools available on other websites

**NEPA Database**
A collection of document sets and details from past NEPA analyses

**Regulatory Flowchart Library**
A collection of regulatory roadmaps that outline the major requirements for developing renewable energy and bulk transmission projects

**Best Practices**
A collection of best practices for efficiently permitting renewable energy and bulk transmission projects
**Topics covered by RAPID**

- Topics represent the major requirements for project development
- Environment topic is further subdivided into areas of potential impact, mirroring the common sections of a NEPA report:

**RAPID TOPICS**
- Agency Land Use Planning
- Project Siting
- Land Access
- Exploration
- Well Field
- General Construction
- Power Plant
- Transmission
- **Environment**
- Water Access & Water Rights

**ENVIRONMENT SUBTOPICS**
- On-Site Evaluation
- Cultural Resources
- Biological Resources
- Previous Land Uses
- Water Resources
- Air Quality Resources
- Geological Resources
- Aesthetic Resources
- Waste & Hazardous Materials
Three Ways to Navigate

Project Type
- Geothermal
- Solar
- Hydropower
- Bulk Transmission

Topic
- Agency Land Use Planning
- Project Siting
- Land Access
- Exploration
- Well Field
- General Construction
- Power Plant
- Transmission
- Environment
- Water Access/Rights
- Plant Decommissioning

Jurisdiction

Map showing states and areas colored in green, indicating different regions and states for jurisdiction.
Collaborating on Regulatory Processes for Renewable Energy Projects

The Regulatory and Permitting Information Desktop (RAPID) Toolkit offers one location for agencies, developers, and industry stakeholders to work together on renewable energy regulatory processes by using a wiki environment to collaborate on regulatory processes, permit guidance, regulations, contacts, and other relevant information.

Choose Your Project Type

- **Bulk Transmission**
  Regulations & Permitting

- **Geothermal**
  Regulations & Permitting

- **Hydropower**
  Regulations & Permitting

- **Solar**
  Regulations & Permitting

Don’t see your technology?

Tools

- Regulatory Flowchart Library
- Reference Library
- Best Practices
- NEPA Database

CONTRIBUTE

The RAPID Toolkit uses a wiki platform where users contribute to content and upload relevant documents. Contributions help facilitate communication between developers and agency personnel at all jurisdiction levels.

Learn How to Contribute
Bulk Transmission Permitting and Regulations

Working on a bulk transmission project is a multiyear venture that requires following regulations and gathering permits during each phase of the project. Search below for information overviews on specific topics to discover some of the regulatory nuances for particular jurisdictions. To help navigate the regulatory process and point you toward specific actions and permits, review the detailed flowcharts provided in the flowchart library.

Learn more about bulk transmission.

**Regulatory Information Overviews**

Read informative summaries about regulations and permitting in a particular jurisdiction.

- Select a Topic
- Select a Jurisdiction

- Search Overviews

**Regulatory Processes**

View regulatory flowcharts for detailed information about federal and state requirements and permits. Federal flowcharts pertain to all states. State-specific flowcharts are available for Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, New Mexico, Nevada, Oregon, Texas, Utah, Washington, and Wyoming. Contact us about including flowcharts for your state.

- Search Flowchart Library
The **Regulatory Information Overviews** provide summaries of regulatory and permitting requirements at the federal and state levels, and allow users to compare requirements among states and technologies. For example, a developer can look up land access requirements for a particular state, or compare requirements across multiple states.
The **Regulatory Flowchart Library** is a set of flowcharts providing detailed information outlining the requirements for developing energy projects, including topics such as land access, siting, exploration, drilling, plant construction and operation, grid interconnection, water resource acquisition, and relevant environmental considerations.

- Leads the developer through a set of questions identifying potential permits that may be triggered by development activities

- Consists of flowcharts and supporting materials, including links to relevant regulations and documents.
Document the regulatory process for project development for:

**Geothermal**
- Federal
- 12 states

**Solar**
- Federal
- California
- 2015: Nevada

**Transmission**
- Federal
- 14 states
  (2 sections of roadmap)

**HydroPower**
- 2015: Federal

Map shows content development for geothermal roadmaps.
PART 1: Develop Regulatory Roadmap

- Research permitting regulations to develop first draft of flowcharts and supporting written documents
- Convene key permitting agency officials, industry personnel, and stakeholders to review and comment on the draft documents
- Integrate comments and updates into regulatory roadmap documents

PART 2: Identify existing issues and overlaps in regulatory authority

- Convene key agency representatives (at all levels) and stakeholders to identify areas of concern, issues, overlaps, differences in implementation, and difficulties in the permitting process
- Facilitate collaboration among agencies to overcome bottlenecks and to optimize the regulatory process

PART 3: Collect Data and Conduct Analyses

- Identify current best practices that improve processes in a variety of industries that could be adopted by the other industries. Collect resources, data and industry interviews to develop analytical reports outlining these best practices
- Provide the data and background analysis needed to inform policymakers and stakeholders in developing new regulations, policies, and rules.
The Reference Library assembles links to permits, processes, guidance, manuals, examples, regulations, rules, contacts, and other regulatory and permitting documents that are publicly available on other websites. Users can search the library to find related documents or add to the library by providing links to additional documents.

### Regulatory Resources

<table>
<thead>
<tr>
<th>TITLE</th>
<th>DOC TYPE</th>
<th>DATE</th>
<th>PUBLISHER</th>
<th>TECHNOLOGY</th>
<th>STATE</th>
<th>TOPIC</th>
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<tbody>
<tr>
<td>BLM Manual: Section 8120 - Tribal Consultation Under Cultural Resources</td>
<td>Guide</td>
<td>2004</td>
<td>BLM</td>
<td>All</td>
<td>Federal</td>
<td>Environment</td>
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<tr>
<td>BLM Manual: Section 8140 - Protecting Cultural Resources</td>
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<td>All</td>
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<td>Environment</td>
</tr>
<tr>
<td>Plain English Guide to the Clean Air Act</td>
<td>Guide</td>
<td>2007</td>
<td>EPA</td>
<td>All</td>
<td>Federal</td>
<td>Environment</td>
</tr>
<tr>
<td>National Environmental Policy Act</td>
<td>Regulation</td>
<td>1970</td>
<td>NA</td>
<td>All</td>
<td>Federal</td>
<td>Environment</td>
</tr>
</tbody>
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The **NEPA Database** is a collection of documents and metadata for previously conducted NEPA analyses that can be used to inform future NEPA analyses. The database catalogs metadata for each project, such as: proposed activities, timelines, applications, reports and decision documents, impacted resources, and proposed and imposed mitigations for these resources.
Best Practices provides a set of analyses outlining best practices, examples and templates for selected topics, such as developing memorandums of understanding (MOUs) among agencies and developing effective public involvement strategies.

<table>
<thead>
<tr>
<th>TITLE</th>
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<tbody>
<tr>
<td>Coordinating Permit Offices and the Development of Utility-Scale</td>
<td>Geothermal</td>
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<td>Geothermal Energy</td>
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<td>Memorandums of Understanding (MOUs) for Interstate Transmission</td>
<td>Bulk Transmission</td>
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<td>Projects</td>
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<td>Public Involvement for Transmission Projects</td>
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<td>NEPA and CEQA: Integrating State and Federal Environmental Review</td>
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<td>for Geothermal Energy Projects</td>
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<tr>
<td>NEPA and NHPA: A Handbook for Integrating NEPA and Section 106</td>
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Coordinated Approaches Reviewed In Detail

- **Hawaii Department of Business, Economic Development and Tourism (DBEDT)**
  - Renewable energy projects
  - Power Production only

- **Alaska Department of Natural Resources (DNR) Office of Project Management and Permitting (OPMP)**
  - Large project coordination
  - No specific limitations

- **Bureau of Land Management**
  - Oil and gas projects on BLM-administered public lands
  - Within the territorial jurisdiction of specific statutorily designated offices
NREL work with Agencies and Industry

**Prepare/Document**
- Regulatory Laws, Guidelines, and Rules

**Consult**
- Capture “As Built” practices

**Revise**
- Incorporate “Best Practices”
  - Soft – change in practice

**Maintain**
- Provide input, comments, tips, and updates to Toolkit

**Optimize**
- Revise Regulatory Laws, Guidelines, and Rules
  - Hard – change in regulations

**OUTCOMES:**
- Agency Factsheets
- Draft flow charts
- Template for non-developed states

**OUTCOMES:**
- “As Built” flow charts
- Identified bottlenecks
- Best Practices
- Analyses

**OUTCOMES:**
- Continued relevance of information
- Increased participation and communication

**OUTCOMES:**
- New Regulations
- Memorandums of Understanding
- Cost Savings

Solar, Hydro
Transmission
Geothermal
Success Stories

Reducing Duplication
An Example of Impact in Nevada

Concern: Water monitoring was required at the federal, state, and locals levels - different sets of design and reporting requirements

Action: Agencies agreed to coordinate: create one set of requirements incorporating needs of all agencies; develop one reporting form; establish a single agency as point of contact

Outcomes: Saves developers time and effort and makes agencies more aware of the concerns and requirements of other jurisdictions; increases communication among agencies.

Facilitating Communication
Providing Clarity Among Agencies in California

Concern: Understanding authority in California is difficult; jurisdictional authority changes from county to county

Action: Development of roadmaps and meetings with agencies/industry. The roadmap outlines nuances, leading developers/agencies to better understand permitting in California

Outcomes: Roadmaps indicating appropriate contacts for each permit by jurisdiction. Roadmaps are helpful not only to developers, but also to agency personnel when navigating complex permitting structures.
Success Stories

Providing Certainty in Uncharted Territory

Development of the Regulatory Roadmap for Colorado

Concern: Because no geothermal power had yet been developed in Colorado, investors were worried about funding a project that would be the first to test the permitting landscape in this state.

Action: Worked with local, state, and federal agencies to roadmap the regulatory and permitting process for geothermal development in Colorado.

Outcomes: Provided more confidence to investors; state agencies used for training employees in new regulations.

Providing Guidance for New States

Development of Geothermal Regulations in New Mexico

Concern: In 2014, New Mexico was in the midst of developing geothermal regulations and determining the division of state authority among agencies.

Action: The RAPID Team met with NM agency personnel to review the current NM regulations and information on geothermal regulations in other states.

Outcomes: The information in the RAPID Toolkit served as a valuable resource to NM state agency personnel working to develop regulations to understand how geothermal was managed in other states and what might work best for NM.
Future Success

• Success of RAPID project has largely been due to the active participation of industry and agency personnel – and their leaders.

• Feedback from stakeholders helps to identify the greatest need and have the largest impact on making the permitting process more efficient.

• For this reason, the tool was developed in a wiki platform to allow industry and agencies to maintain the content in the future so that it continues to provide relevant and accurate information to its users.

• We continue to work with agencies and the White House Implementation Team to engage agency personnel in working together to improve the performance of federal permitting and review of infrastructure projects.

What drives change?

“When 75% of leadership is honestly convinced that business as usual is no longer an acceptable plan and believe that pursuing change is less risky than maintaining the status quo.”

John P. Kotter
Professor of Leadership
Harvard Business School
Future Success – Next Steps for Us (The RAPID Toolkit Team)

**Increase Usability**
- Conduct user interviews, focus groups, heat mapping of website, site statistics
- Redesign the website – Version 1 is scheduled for release 10/31/2014. Version 2 is already in the design phase, and is scheduled to be rolled out September 2015

**Add Content**
- Plans to continue to work with transmission and solar groups to add content
- Kickoff content development for hydro power in 2015
- Potential plans to add wind power in 2016.

**Stakeholder Outreach**
Gain commitment from agencies to adding and maintaining content:
- Meet with as many agencies as possible
  - At all levels – federal, regional, state, local
  - For all technologies
- Try to get on agency agendas for regularly scheduled meetings
- Potentially develop promotional video with testimonials from agencies
- Continue working with the White House Implementation Plan team to incorporate into Federal Permitting Dashboard.
Future Success – Next Steps for You
(Agencies, Developers, Consultants)

Adopt RAPID (agencies)
• Watch relevant pages – you will get emailed with any modifications
• Conduct annual review of relevant content – has your agency had any procedural changes in the past year that should be indicated in the Toolkit?

Use the Website
• Print out and bring to meetings with industry/agencies
• Use as a tool to converse with applicants and other agencies
• Use as a training manual for your staff

Provide Feedback
• Provide feedback on updates – on the site, email us
• Edit data – update contact information, suggestions for others, upload documents to the library

Help to Spread the Word
• Share and discuss with others in your organization/agency
• Discuss with superiors for adoption and maintenance (agencies)
• Make agency personnel and other developers aware of RAPID and ask them to use and help to maintain.
Thank You

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Dietrich Hoefner, Amanda Palazzolo, Daniel Leppert,
Adam Bergfelder, Jeremy Balu, Alex Rodriguez, William Browning

NREL OpenEI Developers:
Nick Langle, Jon Weers, and Jay Huggins