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Geothermal NEPA Database on OpenEI

Katherine R. Young and Aaron Levine

BACKGROUND

Barrier — Collective NEPA timeline for a single project can be long and can take up a significant portion of the geothermal development timeline.

Goal — Review historical geothermal NEPA timelines to identify potential areas for reducing timelines while maintaining goals of NEPA.

- Data were collected to inform analyses of NEPA timelines.
- Collected data were made publically available via NEPA Database in case others might find the data useful.
- NREL used a wiki platform to allow industry and agencies to maintain the content in the future (if desired) so that it continues to provide relevant information to users.
- The long-term success of the NEPA Database will depend on the willingness of federal agencies, industry, and others to populate the database with NEPA and related documents, and to use the data for their own analyses.
- As the information and capabilities of the database expand, developers and agencies can save time on new NEPA reports by accessing a single location to research related activities, their potential impacts, and previously proposed and imposed mitigation measures.

DOCUMENT SOURCES

Source	Type of Data	Comments on Available Data
Internet Search	EA and EIS reports	Some EA and EIS reports were available via the internet, largely because they were temporarily being made available for public comment
BLM eNEPA Database https://www.blm.gov/epl-front-office/eplanning/nepa/nepa_register.do	CX and DNA Worksheets, EA and EIS reports for BLM projects	Records date from 2011; contains links to CX, DNA, EA, and EIS documents; not complete for all offices
BLM LR2000 http://www.blm.gov/lr2000/	BLM serial register pages with dates	BLM serial register pages (Case records for transaction records of leases, Rights of Way, Notice of Intent for exploration); records date from 1970s
Individual BLM Field Office Websites	EA and EIS reports open for public comment for BLM projects	NEPA documents that are temporarily available. Some offices' records date back to 2008; not complete for all offices, must know that documents exist, offices do not maintain a list of geothermal projects
Field Office Paper Files	BLM reports, applications, FONSIs, decisions	Geothermal project files, records date from 1980s, most complete source, document numbers are required for request
DOE NEPA Database http://energy.gov/nepa/nepa-documents	Reports, FONSIs, decisions, for DOE projects	Reported to have a complete set of data for DOE-led NEPA analyses from 2008 to the present

CU – Casual Use
CX – Categorical Exclusion
DNA – Determination of NEPA Adequacy
EA – Environmental Assessment
EIS – Environmental Impact Statement
FONSI – Finding of No Significant Impact

DOCUMENTS COLLECTED

Types of documents collected include:

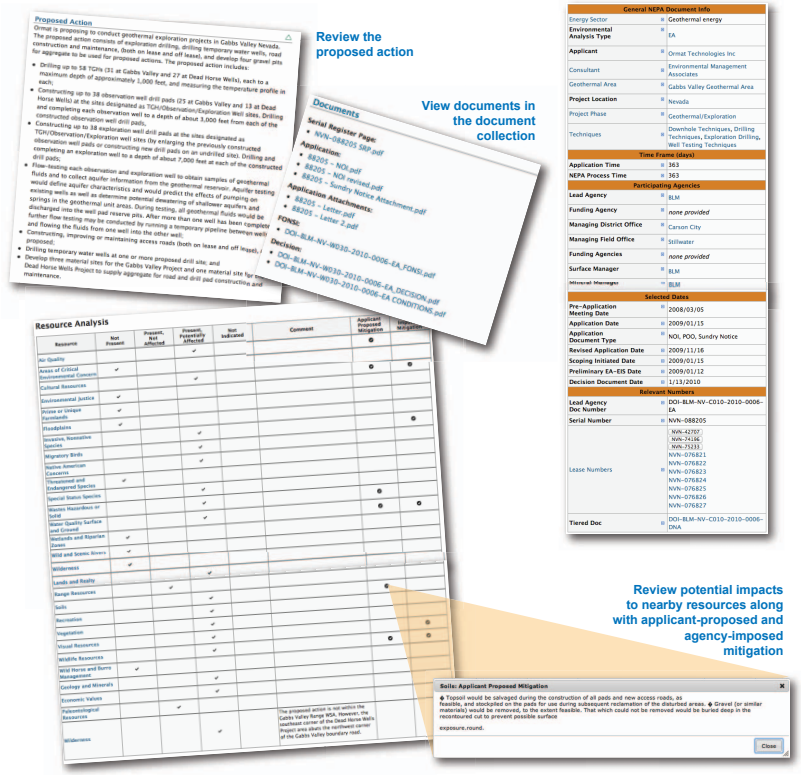
- Application Files
- Casual Use Documents
- Determination of NEPA Adequacy (DNA) Worksheets
- Categorical Exclusion Approvals
- BLM Serial Register Pages
- Environmental Assessment Reports
- Environmental Impact Statement Reports
- Decision Record Documents
- Findings of No Significant Impact (FONSI) Documents

Type of Document Collection	# of Database Entries	Permit Applications[1]	Reports	FONSIs	Decisions
Casual Use	26	18	19	NA	20
Determinations of NEPA Adequacy	30	1	27	NA	27
Categorical Exclusions	53	17	13 (not common)	NA	53
Environmental Assessments	61	2	50	39	17
Environmental Impact Statements	6	0	5	NA	4
TOTALS	178	38	114	39	70

[1]Note that we expect the number of permit applications collected in our database to be low (compared to the collection of other documents), because many of these are proprietary. Only publically available permit applications were included in the database.

EXAMPLE NEPA DOCUMENT COLLECTION

NEPA Document Collection for: DOI-BLM-NV-C010-2010-0006-EA Gabbs Valley and Dead Horse Wells Geothermal Exploration Projects EA



FOR MORE INFORMATION

Visit the NEPA Database on the RAPID toolkit

http://en.openei.org/wiki/NEPA

Read the full paper at:
Young, Katherine R. and Aaron Levine, *Geothermal National Environmental Policy Act Database on Publically Available Open Energy Information Website*, Geothermal Resource Council, *Transactions*, Volume 38. (2014)

QUERY BY GEOTHERMAL AREA

EXAMPLE: New York Canyon Geothermal Area (Nevada)

Document #	Analysis Type	Applicant	Application Date	Decision Date	Lead Agency	Development Phase(s)	Techniques
LLNV-WO1000-2009-0034-CX	CX	TGP Dixie Development Company, LLC	17 June 2009	16 July 2009	BLM	Exploration	2-M Probe Survey Ground Magnetics
NVN-087791	CU	TGP Dixie Development Company	23 June 2009	21 July 2009	BLM	Exploration	Magnetotellurics
NVN-087811	CU	TGP Dixie Development Co	30 June 2009	21 July 2009	BLM	Exploration	Magnetotellurics
NVN-087812	CU	TGP Dixie Development Co	30 June 2009	21 July 2009	BLM	Exploration	Electrical Techniques
DOI-BLM-NV-W010-2010-0004-EA	EA	Terra-Gen Power LLC	23 November 2009	15 October 2010	BLM	Exploration	Well Testing Techniques Exploration Drilling
DOI-BLM-NV-W010–2012–0005–EA	EA	Terra-Gen Power LLC	30 May 2011	3 June 2013	BLM	Power Plant Well Field Transmission	Development Drilling Downhole Techniques

QUERY BY ACTIVITY

EXAMPLE: Seismic Surveys

Document #	Analysis Type	Applicant	Geothermal Area	Lead Agency	District Office	Field Office	Development Phase	Activity
DOI-BLM-CA-670-2010-CX	CX	Ram Power	*unknown*	BLM	California Desert		Exploration	Seismic
DOI-BLM-ID-T020-2012-0003-CX	CX	Agua Caliente LLC	Abraham Hot Springs	BLM	Twin Falls	Burley	Exploration	Seismic
DOI-BLM-NV-C010-2010-0008-CX	CX	Terra-Gen Power LLC	Dixie Meadows	BLM	Carson City	Stillwater	Exploration	Seismic
DOI-BLM-NV-C010-2011-0004-CX	CX	AltaRock Energy Inc	Dixie Valley	BLM	Carson City	Stillwater	Exploration	Seismic
DOI-BLM-NV-CO1000-2010-0010-CX	CX	Terra-Gen Power LLC	Coyote Canyon	BLM	Carson City	Stillwater	Exploration	Seismic
DOI-BLM-NV-CO1000-2010-0022-CX	CX	Terra-Gen Power LLC	Coyote Canyon	BLM	Carson City	Stillwater	Exploration	Electromagnetic Magnetotelluric Seismic
DOI-BLM-NV-W010-2010-0041-CX	CX	Stephen D. Muir	Brady Hot Springs	BLM	Winnemucca	Humboldt River	Exploration	Seismic
DOI-BLM-NV-W010-2010-0043-CX	CX	Oski Energy LLC	Abraham Hot Springs	BLM	Winnemucca	Humboldt River	Exploration	Seismic
DOI-BLM-NV-W030-2010-0021-CX	CX	US Geothermal Inc	San Emidio Desert	BLM	Winnemucca		Exploration	Seismic
DOI-BLM-NV-W030-2011-0007-CX	CX	US Geothermal Inc	San Emidio Desert	BLM	Winnemucca		Exploration	Seismic
DOI-BLM-OR-P000-2010-0003-EA	EA	Davenport Power LLC	Newberry Caldera	BLM	Prineville		Exploration	Seismic Drilling Well Testing

QUERY BY RESOURCE (POTENTIAL IMPACT)

Have a project you're developing?
Use the database to review previously proposed and imposed mitigation measures for activities similar to your project or in the same area as your project

EXAMPLE: Air Quality

Document #	Analysis Type	Project Type	Activity	Analysis	Applicant-Proposed Mitigation	Agency-Imposed Mitigation
DOI-BLM-CA-670-2010-CX	EA	Geothermal	Exploration Drilling, Well Testing	Present, Potentially Affected	Water and gravel would be applied to the disturbed ground during the construction and utilization of the drill pads and access roads as necessary to control dust.	
DOI-BLM-NV-C010-2010-0008-EA	EA	Geothermal	Exploration Drilling, Well Testing	Not Present	All applicable state and federal air quality standards would be met through the use of the best available technology to control emissions; Application of water on roads and pads when necessary to suppress dust; Prudent speed limits would be observed on unpaved roads throughout the project area in order to reduce dust emissions; and Access roads, project area roads, and other traffic areas would be maintained on a regular basis to minimize dust and provide for safe travel conditions.	
DOI-BLM-NV-C010-2010-0008-CX	EA	Geothermal	Exploration Drilling, Well Testing	Present, Potentially Affected		To minimize air pollution emissions from construction activities and construction and drill rig diesel engines, the following BMP's for fugitive dust and diesel exhaust would be implemented during operational activities: • Surfacing access roads with aggregate materials, wherever appropriate • Using dust abatement techniques, such as watering on unpaved, un-vegetated surfaces to minimize airborne dust, as needed (The source of water to be used for dust abatement is described in Section 2.1.8.) • Posting and enforcing speed limits to reduce fugitive dust (speed limit of 15 miles per hour, as necessary) • Applying dust abatement techniques (such as watering, requiring loader buckets to be emptied slowly, minimizing drop heights, etc.) to earth-moving, excavating, trenching, and grading activities • Minimizing equipment and vehicle idling times during construction activities

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