Draft Environmental Impact Statement for the Sigurd to Red Butte No. 2 – 345kV Transmission Project

DES 11-22

DOI-BLM-UT-C010-2009-0048-EIS

Case File: UTU 83067

May 2011

Volume I of II

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Color Country District
Cedar City Field Office
176 East D.L. Sargent Drive
Cedar City, Utah 84721

Cooperating Agencies
U.S. Forest Service (Dixie and Fishlake National Forests)
U.S. Army Corps of Engineers
Utah Public Land Policy Coordination Office
Utah School and Institutional Trust Lands Administration
Counties: Beaver, Iron, Millard, Sevier, and Washington
Communities: Enterprise and St. George

May 2011

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Draft Environmental Impact Statement for the Sigurd to Red Butte No. 2 – 345kV Transmission Project

Lead Agency:	U.S. Department of the Interior Bureau of Land Management Color Country District – Cedar City Field Office
Cooperating Agencies:	U.S. Forest Service (Dixie and Fishlake National Forests) U.S. Army Corps of Engineers Utah Public Land Policy Coordination Office Utah School and Institutional Trust Lands Administration Beaver County, Utah Enterprise City, Utah Iron County, Utah Millard County, Utah Sevier County, Utah St. George City, Utah Washington County, Utah
Type of Action:	Right-of-Way Grant from the Bureau of Land Management Special-Use Permit from the U.S. Forest Service
Project Location:	Sevier, Millard, Beaver, Iron, and Washington counties, Utah
For further information on this document, contact:	Bureau of Land Management Cedar City Field Office Attn: Tamara Gertsch 176 East D.L. Sargent Drive Cedar City, Utah 84720 (307) 775-6115 U.S. Forest Service Dixie National Forest Attn: Janel McCurdy 1789 North Wedgewood Lane Cedar City, Utah 84721 (435) 865-3700 (559) 920-3831
Or email:	utsrbproj@blm.gov
Date by which comments must be received:	45 days after the publication of the Notice of Availability in the *Federal Register*

ABSTRACT

This Draft Environmental Impact Statement (EIS) has been prepared to analyze and disclose the impacts of granting a right-of-way across federal land to PacifiCorp (doing business as Rocky Mountain Power, the Proponent) for the purpose of constructing, operating, and maintaining the Sigurd to Red Butte No. 2 – 345-kilovolt (kV) Transmission Project (Project), which includes the single-circuit, alternating-current, overhead transmission line, ancillary facilities, and expansion of the existing Sigurd Substation on private land. The Project would be located in Sevier, Millard, Beaver, Iron, and Washington counties in Utah and would cover a distance of approximately 160 miles. The Draft EIS analyzes the Proposed Action and several alternatives, including taking no action, and assesses the potential impacts on the natural, human, and cultural environment of implementing the Proposed Action or an alternative. Under the Proposed Action, the Bureau of Land Management would issue a right-of-way grant and the U.S. Forest Service would issue a special-use permit for constructing, operating, and maintaining the proposed transmission line and associated facilities.

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LIST OF ACRONYMS AND ABBREVIATIONS

µg/m3	micrograms per cubic meter
µT	units of microtesla
A	Amperes
AADT	Average annual daily traffic
AC	Alternating current
ACEC	Area of critical environmental concern
ACGIH	American Conference of Governmental Industrial Hygienists
ACHP	Advisory Council on Historic Preservation
ACSR	Aluminum conductor steel reinforced
AIRFA	American Indian Religious Freedom Act of 1978
AM	Amplitude-modulated
APA	Agriculture protection areas
APCD	Air Pollution Control Division
APE	Area of potential effect
APLIC	Avian Power Line Interaction Committee
ARM	Ambient ratio method
ARPA	Archaeological Resources Protection Act of 1979
ATV	All-terrain vehicle
BCC	Birds of critical concern
BEA	U.S. Department of Commerce, Bureau of Economic Analysis
BES	Bulk Electric System
BLM	Bureau of Land Management
BMP	Best management practice
BP	Before Present
BPA	Bonneville Power Administration
BSFC	Brake-specific fuel consumption
BIA	Bureau of Indian Affairs
CAA	Clean Air Act of 1963
CAS	Conservation Agreement Species
CBGARMP	Cedar/Beaver/Garfield/Antimony Resource Area Resource Management Plan
CDPHE	Colorado Department of Public Health and Environment
CEQ	Council on Environmental Quality
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act of 1980
CCFO	Cedar City Field Office
CFR	Code of Federal Regulations
CIC	Compliance inspection contractor
CO	Carbon monoxide
CR	County Road
CWA	Clean Water Act of 1972
CWGs	Community working groups
db	Decibel
dBµV/m	Decibels above 1 microvolt per meter

dBA	Decibel (A-weighted)
DC	Direct current
DEM	Digital elevation model
DG&T	Deseret Generation and Transmission
DHHS	U.S. Department of Health and Human Services
DOE	U.S. Department of Energy
DSM	Demand-side management
DWR	Utah Department of Natural Resources, Division of Water Resources
EHV	Extra high voltage
EIS	Environmental impact statement
EMF	Electric and magnetic fields
ENBB	Environmental Notification Bulletin Board
E.O.	Executive Order
EPA	U.S. Environmental Protection Agency
EPAct	Energy Policy Act of 2005
ESA	Endangered Species Act
ESRI	Environmental Systems Research Institute, Inc.
FAA	Federal Aviation Administration
FCC	Federal Communication Commission
FEMA	Federal Emergency Management Agency
FERC	Federal Energy Regulatory Commission
FFO	Fillmore Field Office
FHWA	Federal Highway Administration
FLPMA	Federal Land Policy and Management Act of 1976
FM	Frequency-modulated signal
FMP	Fire Management Plan
FMU	Fire Management Unit
FOCA	Federal Office of Civil Aviation
FPPA	Farmland Protection Policy Act of 1981
FR	Forest Road
FSH	Forest Service Handbook
FWS	U.S. Fish and Wildlife Service
FY	Fiscal year
g	Gram
G	Gauss
g/bhp-hr	Grams/brake horsepower-hour
GAP	Southwest Regional Gap Analysis Project
GIS	Geographic Information Systems
GLO	General Land Office
HAP	Hazardous air pollutants
HC	Hydrocarbon
HMA	Herd management area
hp	Horsepower
HRSA	Health Resources and Service Administration
HUC	Hydrologic unit code
Hz	Hertz

I-15	Interstate 15
I-70	Interstate 70
ICES	International Committee on Electromagnetic Safety
ICNIRP	International Commission on Non-Ionizing Radiation Protection
ID	Interdisciplinary
IEEE	Institute of Electrical Electronics Engineers
IMACS	Intermountain Antiquities Computer System
IOP	Interagency Operation Procedures
IPP	Intermountain Power Project
IRA	Inventoried roadless area
IRP	Integrated resource plan
K	Hundred thousand
kHz	Kilohertz
KOP	Key observation points
kV	Kilovolt
kV/cm	Kilovolts per centimeter
kV/m	Kilovolts per meter
kW	Kilowatt
lb/hp-hr	Pound per horsepower-hour
LDS	Church of Jesus Christ of Latter-day Saints
LQs	Location quotients
LRMP	Land and resource management plan
LWCs	Lands with wilderness characteristics
LWCF	Land and Water Conservation Fund Act
m	Meter
M	Million
mA	Milliamperes
MBTA	Migratory Bird Treaty Act
mG	Milligauss
mg/l	Milligrams per litre
mg/m^3	Milligrams per cubic meter
MIS	Management indicator species
MP	Milepost
mph	Miles per hour
msl	Mean sea level
MTP	Motorized travel plan
MV	Map Volume
MW	Megawatt
NAAQS	National ambient air quality standards
NACo	National Association of Counties
NAGPRA	Native American Graves Protection and Repatriation Act of 1990
NAICS	North American Industry Classification System
NAIP	National Agricultural Imagery Program
NCA	Noise Control Act of 1972
NEIC	National Earthquake Information Center
NEPA	National Environmental Policy Act of 1969
NERC	National Electric Reliability Council

NESC	National Electric Safety Code
NESHAP	National Emission Standards for Hazardous Air Pollutants
NFIP	National Flood Insurance Program
NFMA	National Forest Management Act of 1976
NGS	National Geographic Society
NHL	National Historic Landmark
NHPA	National Historic Preservation Act of 1966
NHT	National Historic Trail
NIFC	National Interagency Fire Center
NMHC	Nonmethane hydrocarbon
NO_2	Nitrogen dioxide
NO_x	Nitrogen oxides
NOI	Notice of Intent
NPDES	National Pollutant Discharge Elimination System
NPS	National Park Service
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
OATT	Open access transmission tariff
ODEX	Brand name for under-reamer type drilling
OHV	Off-highway vehicle
OPGW	Overhead optical ground wire
OPLMA-PRP	Omnibus Public Land Management Act - Paleontological Resource Preservation
OSHA	Occupational Safety and Health Administration
OST	Old Spanish Trail
PIAA	Project Impact Analysis Area
P.L.	Public Law
PEM	Palustrine emergent
PFO	Palustrine forested overstory
PFYC	Potential fossil yield classification
PGA	Peak ground acceleration
PIF	Partners in Flight
PLPCO	Utah Governor's Public Lands Policy Coordination Office
PM_{10}	Particulate matter less than 10 microns in diameter
$PM_{2.5}$	Particulate matter less than 2.5 microns in diameter
PMFP	Pinyon Management Framework Plan
POD	Plan of Development
PPA	Pollution Prevention Act of 1990
ppb	Parts per billion
ppm	Parts per million
PRMMP	Paleontological resources monitoring and mitigation plan
Project	Sigurd to Red Butte No. 2 – 345kv Transmission Project
Proponent	Rocky Mountain Power
PRPA	Paleontological Resources Preservation Act of 2009
PRTP	Paleontological Resources Treatment Plan
PSC	Public Service Commission
PSS	Palustrine scrub/shrub
RARE	Roadless Area Review and Evaluation II of 1979
RCRA	Resource Conservation and Recovery Act of 1976

ReMi	Refraction micro-tremor
RFO	Richfield Field Office
RFORMP	Richfield Field Office Resource Management Plan
RMP	Resource management plan
ROD	Record of Decision
ROS	Recreation opportunity spectrum
RRO	Regional Reliability Organization
SCCAW	Sevier Citizens for Clean Air and Water
SDWA	Safe Drinking Water Act of 1974
SGFO	St. George Field Office
SGFORMP	St. George Field Office Resource Management Plan
SHPO	State Historic Preservation Office
SILs	Significant impact levels
SIO	Scenic integrity objectives
SITLA	School and Institutional Trust Lands Administration
SLRU	Sensitivity level rating unit
SMS	Scenery management system
SO_2	Sulfur dioxide
SQRUs	Scenic Quality Rating Units
SR	State Route
SRMA	Special Recreation Management Area
SSURGO	Soil survey geographic database
STATSGO	State soil geographic database
SUTGO	Southwest Utah Technical Studies Group
SUWA	Southern Utah Wilderness Alliance
SVP	Society of Vertebrate Paleontology
SWPPP	Stormwater Pollution Prevention Plan
TCP	Traditional cultural properties
TDS	Total dissolved solids
TMDL	Total maximum daily load
UAC	Utah Administrative Code
UAMPS	Utah Associated Municipal Power Systems
UDEQ	Utah Department of Environmental Quality
UDNR	Utah Department of Natural Resources
UDWR	Utah Division of Wildlife Resources
UFFSL	Utah Division of Forestry, Fire and State Lands
UGS	Utah Geological Survey
UNHP	Utah Natural Heritage Program
UPDES	Utah Pollutant Discharge Elimination System
UREZ	Utah Renewable Energy Zone
USACE	U.S. Army Corps of Engineers
U.S.C.	United States Code
USDA	U.S. Department of Agriculture
USDI	U.S. Department of the Interior
USFS	U.S. Forest Service
USGS	U.S. Geological Survey

V/m	Volts per meter
VOC	Volatile organic compound
VRI	Visual resource inventory
VRM	Visual resource management
WECC	Western Electricity Coordinating Council
WECCO	Western Electrochemical Company
WEG	Wind Erodibility group
WMA	Wildlife management area
WRAP	Western Regional Air Partnership
WRCC	Western Regional Climate Center
WSRMP	Warm Springs Resource Area Resource Management Plan
WWEC	West-wide Energy Corridor