

Hydropower Run-of-River Sites with Monthly Power Generation



Tags

hydropower, run-of-river, generation

Summary

Depicts run-of-river (ROR) hydroelectric power plant sites in the U.S., attributed with descriptive information, and minimum and maximum power generation by month of year between 1970 and 2015.

Description

Depicts run-of-river (ROR) hydroelectric power plant sites in the U.S., attributed with descriptive information, and minimum and maximum power generation by month of year between 1970 and 2015. Generation data were obtained from several U.S. Energy Information Administration forms, including forms 860, 906, 920, 923, and others.

Credits

Argonne National Laboratory; U.S. Department of Energy: Office of Energy Efficiency & Renewable Energy, and Energy Information Administration

Use limitations

There are no access and use limitations for this item.

Extent

West -135.340800 East -68.002600
North 59.454500 South 31.403300

Scale Range

Maximum (zoomed in) 1:50,000
Minimum (zoomed out) 1:20,000,000

ArcGIS Metadata

Topics and Keywords

THEMES OR CATEGORIES OF THE RESOURCE inlandWaters, utilitiesCommunication

Citation

TITLE Hydropower Run-of-River Sites with Monthly Power Generation
PUBLICATION DATE 2016-12-19 00:00:00
PRESENTATION FORMATS * digital map

Citation Contacts

RESPONSIBLE PARTY

INDIVIDUAL'S NAME Tom Veselka

ORGANIZATION'S NAME Argonne National Laboratory

CONTACT'S POSITION Principal Computational Engineer - Energy Systems

CONTACT'S ROLE originator

CONTACT INFORMATION

ADDRESS

TYPE

E-MAIL ADDRESS tdveselka@anl.gov

Resource Details

DATASET LANGUAGES * English (UNITED STATES)

DATASET CHARACTER SET utf8 - 8 bit UCS Transfer Format

STATUS on-going

SPATIAL REPRESENTATION TYPE * vector

* PROCESSING ENVIRONMENT Microsoft Windows 7 Version 6.1 (Build 7601) Service Pack 1; Esri ArcGIS 10.3.0.4322

CREDITS

Argonne National Laboratory; U.S. Department of Energy: Office of Energy Efficiency & Renewable Energy, and Energy Information Administration

ARCGIS ITEM PROPERTIES

* NAME dam_site_ror_gen_minmax

Extents

EXTENT

GEOGRAPHIC EXTENT

BOUNDING RECTANGLE

EXTENT TYPE Extent used for searching

* WEST LONGITUDE -135.340800

* EAST LONGITUDE -68.002600

* NORTH LATITUDE 59.454500

* SOUTH LATITUDE 31.403300

* EXTENT CONTAINS THE RESOURCE Yes

EXTENT IN THE ITEM'S COORDINATE SYSTEM

* WEST LONGITUDE -15066068.939554

* EAST LONGITUDE -7570014.804619

* SOUTH LATITUDE 3685236.833652

* NORTH LATITUDE 8279277.032779

* EXTENT CONTAINS THE RESOURCE Yes

Resource Points of Contact

POINT OF CONTACT

INDIVIDUAL'S NAME Tom Veselka

ORGANIZATION'S NAME Argonne National Laboratory

CONTACT'S POSITION Principal Computational Engineer - Energy Systems

CONTACT'S ROLE originator

CONTACT INFORMATION

ADDRESS

TYPE

E-MAIL ADDRESS tdveselka@anl.gov

Resource Maintenance

RESOURCE MAINTENANCE

UPDATE FREQUENCY as needed

Spatial Reference

ARCgis COORDINATE SYSTEM

- * TYPE **Projected**
- * GEOGRAPHIC COORDINATE REFERENCE **GCS_WGS_1984**
- * PROJECTION **WGS_1984_Web_Mercator_Auxiliary_Sphere**
- * COORDINATE REFERENCE DETAILS
 - PROJECTED COORDINATE SYSTEM
 - WELL-KNOWN IDENTIFIER **102100**
 - X ORIGIN **-22041257.77387803**
 - Y ORIGIN **-30241100**
 - XY SCALE **144148035.89861274**
 - Z ORIGIN **-100000**
 - Z SCALE **10000**
 - M ORIGIN **-100000**
 - M SCALE **10000**
 - XY TOLERANCE **0.001**
 - Z TOLERANCE **0.001**
 - M TOLERANCE **0.001**
 - HIGH PRECISION **true**
 - LATEST WELL-KNOWN IDENTIFIER **3857**
 - WELL-KNOWN TEXT PROJCS["WGS_1984_Web_Mercator_Auxiliary_Sphere",GEOGCS["GCS_WGS_1984",DATUM["D_WGS_1984",SPHEROID["WGS_1984",6378137.0,298.257223563]],PRIMEM["Greenwich",0.0],UNIT["Degree",0.0174532925199433]],PROJECTION["Mercator_Auxiliary_Sphere"],PARAMETER["False_Easting",0.0],PARAMETER["False_Northing",0.0],PARAMETER["Central_Meridian",0.0],PARAMETER["Standard_Parallel_1",0.0],PARAMETER["Auxiliary_Sphere_Type",0.0],UNIT["Meter",1.0],AUTHORITY["EPSG",3857]]

REFERENCE SYSTEM IDENTIFIER

- * VALUE **3857**
- * CODESPACE **EPSG**
- * VERSION **8.2.6**

Spatial Data Properties

VECTOR

- * LEVEL OF TOPOLOGY FOR THIS DATASET **geometry only**

GEOMETRIC OBJECTS

- FEATURE CLASS NAME **dam_site_ror_gen_minmax**
- * OBJECT TYPE **point**
- * OBJECT COUNT **270**

ARCgis FEATURE CLASS PROPERTIES

- FEATURE CLASS NAME **dam_site_ror_gen_minmax**
- * FEATURE TYPE **Simple**
- * GEOMETRY TYPE **Point**
- * HAS TOPOLOGY **FALSE**
- * FEATURE COUNT **270**
- * SPATIAL INDEX **TRUE**
- * LINEAR REFERENCING **FALSE**

Distribution

DISTRIBUTION FORMAT

- * NAME **File Geodatabase Feature Class**

Fields

DETAILS FOR OBJECT dam_site_ror_gen_minmax

- * TYPE Feature Class
- * ROW COUNT 270

FIELD OBJECTID

- * ALIAS OBJECTID
- * DATA TYPE OID
- * WIDTH 4
- * PRECISION 0
- * SCALE 0
- * FIELD DESCRIPTION
Internal feature number.
- * DESCRIPTION SOURCE
Esri
- * DESCRIPTION OF VALUES
Sequential unique whole numbers that are automatically generated.

FIELD RunID

- ALIAS Model Run Id
- * DATA TYPE Integer
- * WIDTH 4
- * PRECISION 0
- * SCALE 0
- FIELD DESCRIPTION
Internal modeling unique identifier.
- DESCRIPTION SOURCE
Argonne

FIELD Pt_Name

- ALIAS Plant Name
- * DATA TYPE String
- * WIDTH 8000
- * PRECISION 0
- * SCALE 0
- FIELD DESCRIPTION
Name
- DESCRIPTION SOURCE
Argonne

FIELD Lat

- ALIAS Latitude
- * DATA TYPE Double
- * WIDTH 8
- * PRECISION 0
- * SCALE 0

FIELD Long_

- ALIAS Longitude
- * DATA TYPE Double
- * WIDTH 8
- * PRECISION 0
- * SCALE 0

FIELD NERC

ALIAS NERC Region

* DATA TYPE String

* WIDTH 8000

* PRECISION 0

* SCALE 0

FIELD DESCRIPTION

Name of North American Electrical Reliability (NERC) Region

DESCRIPTION SOURCE

NERC

FIELD State

* ALIAS State

* DATA TYPE String

* WIDTH 8000

* PRECISION 0

* SCALE 0

FIELD DESCRIPTION

State the plant is within.

FIELD County

* ALIAS County

* DATA TYPE String

* WIDTH 8000

* PRECISION 0

* SCALE 0

FIELD DESCRIPTION

County the plant is within

FIELD City

* ALIAS City

* DATA TYPE String

* WIDTH 8000

* PRECISION 0

* SCALE 0

FIELD BalanceAuth

ALIAS Balancing Authority

* DATA TYPE String

* WIDTH 8000

* PRECISION 0

* SCALE 0

FIELD HUC8

* ALIAS HUC8

* DATA TYPE Integer

* WIDTH 4

* PRECISION 0

* SCALE 0

FIELD DESCRIPTION

Hydrologic Unit Code (Level 8)

DESCRIPTION SOURCE

USGS

FIELD Region

ALIAS Hydrologic Region (HUC2)

* DATA TYPE String

* WIDTH 8000

* PRECISION 0

* SCALE 0

FIELD DESCRIPTION

Name of hydrologic region (HUC2)

DESCRIPTION SOURCE

USGS

FIELD SubRegion

ALIAS Hydrologic Sub-region (HUC4)

* DATA TYPE String

* WIDTH 8000

* PRECISION 0

* SCALE 0

FIELD DESCRIPTION

Name of hydrologic sub-region (HUC4)

DESCRIPTION SOURCE

USGS

FIELD Basin

ALIAS Hydrologic Basin (HUC6)

* DATA TYPE String

* WIDTH 8000

* PRECISION 0

* SCALE 0

FIELD DESCRIPTION

Name of hydrologic basin (HUC6)

DESCRIPTION SOURCE

USGS

FIELD SubBasin

ALIAS Hydrologic Sub-Basin (HUC8)

* DATA TYPE String

* WIDTH 8000

* PRECISION 0

* SCALE 0

FIELD DESCRIPTION

Name of hydrologic sub-basin (HUC8)

DESCRIPTION SOURCE

USGS

FIELD AreaSqMiles

ALIAS Area (sq mi)

* DATA TYPE Integer

* WIDTH 4

* PRECISION 0

* SCALE 0

FIELD DESCRIPTION

Area in square miles of hydrologic sub-basin.

DESCRIPTION SOURCE

USGS

FIELD Type_

ALIAS Type

* DATA TYPE String

* WIDTH 8000

* PRECISION 0

* SCALE 0

FIELD DESCRIPTION

Facility Type

DESCRIPTION SOURCE

Argonne

FIELD Mode

* ALIAS Mode

* DATA TYPE String

* WIDTH 8000

* PRECISION 0

* SCALE 0

FIELD DESCRIPTION

Facility Mode

DESCRIPTION SOURCE

Argonne

FIELD HY_MW

ALIAS Hydropower Capacity (MW)

* DATA TYPE Integer

* WIDTH 4

* PRECISION 0

* SCALE 0

FIELD DESCRIPTION

Hydropower Capacity (MW)

FIELD HY_MWh

ALIAS Hydropower Generation (MWh)

* DATA TYPE Double

* WIDTH 8

* PRECISION 0

* SCALE 0

FIELD DESCRIPTION

Hydropower Generation (MWh)

FIELD PS_MWh

ALIAS Pumped Storage Generation (MWh)

* DATA TYPE Integer

* WIDTH 4

* PRECISION 0

* SCALE 0

FIELD DESCRIPTION

Pumped Storage Generation (MWh)

FIELD PS_MW

ALIAS Pumped Storage Capacity (MW)

* DATA TYPE Integer

* WIDTH 4

* PRECISION 0

* SCALE 0

FIELD DESCRIPTION

Pumped Storage Capacity (MW)

FIELD EIA_ID

ALIAS EIA Facility Id

* DATA TYPE Integer

* WIDTH 4

* PRECISION 0

* SCALE 0

FIELD DESCRIPTION

EIA Facility Id

DESCRIPTION SOURCE

EIA

FIELD FERC_Docket

ALIAS FERC Docket Number

* DATA TYPE String

* WIDTH 8000

* PRECISION 0

* SCALE 0

FIELD DESCRIPTION

FERC Docket Number

DESCRIPTION SOURCE

FERC

FIELD MinGenKw01

* ALIAS MinGenKw01

* DATA TYPE Double

* WIDTH 8

* PRECISION 0

* SCALE 0

FIELD DESCRIPTION

Minimum Generation (kW, January, 1970-2015)

DESCRIPTION SOURCE

Argonne

FIELD MinGenKw02

ALIAS Minimum Generation (kW, February, 1970-2015)

* DATA TYPE Double

* WIDTH 8

* PRECISION 0

* SCALE 0

FIELD DESCRIPTION

Minimum Generation (kW, February, 1970-2015)

DESCRIPTION SOURCE

Argonne

FIELD MinGenKw03

* ALIAS MinGenKw03

* DATA TYPE Double

* WIDTH 8

* PRECISION 0

* SCALE 0

FIELD MinGenKw04

* ALIAS MinGenKw04

* DATA TYPE Double

* WIDTH 8

* PRECISION 0

* SCALE 0

FIELD **MinGenKw05**

- * ALIAS MinGenKw05
- * DATA TYPE Double
- * WIDTH 8
- * PRECISION 0
- * SCALE 0

FIELD **MinGenKw06**

- * ALIAS MinGenKw06
- * DATA TYPE Double
- * WIDTH 8
- * PRECISION 0
- * SCALE 0

FIELD **MinGenKw07**

- * ALIAS MinGenKw07
- * DATA TYPE Double
- * WIDTH 8
- * PRECISION 0
- * SCALE 0

FIELD **MinGenKw08**

- * ALIAS MinGenKw08
- * DATA TYPE Double
- * WIDTH 8
- * PRECISION 0
- * SCALE 0

FIELD **MinGenKw09**

- * ALIAS MinGenKw09
- * DATA TYPE Double
- * WIDTH 8
- * PRECISION 0
- * SCALE 0

FIELD **MinGenKw10**

- * ALIAS MinGenKw10
- * DATA TYPE Double
- * WIDTH 8
- * PRECISION 0
- * SCALE 0

FIELD **MinGenKw11**

- * ALIAS MinGenKw11
- * DATA TYPE Double
- * WIDTH 8
- * PRECISION 0
- * SCALE 0

FIELD **MinGenKw12**

- * ALIAS MinGenKw12
- * DATA TYPE Double
- * WIDTH 8
- * PRECISION 0
- * SCALE 0

FIELD MaxGenKw01

ALIAS Maximum Generation (kW, January, 1970-2015)

* DATA TYPE Double

* WIDTH 8

* PRECISION 0

* SCALE 0

FIELD DESCRIPTION

Maximum Generation (kW, January, 1970-2015)

DESCRIPTION SOURCE

Argonne

FIELD MaxGenKw02

ALIAS Maximum Generation (kW, February, 1970-2015)

* DATA TYPE Double

* WIDTH 8

* PRECISION 0

* SCALE 0

FIELD DESCRIPTION

Maximum Generation (kW, February, 1970-2015)

DESCRIPTION SOURCE

Argonne

FIELD MaxGenKw03

* ALIAS MaxGenKw03

* DATA TYPE Double

* WIDTH 8

* PRECISION 0

* SCALE 0

FIELD MaxGenKw04

* ALIAS MaxGenKw04

* DATA TYPE Double

* WIDTH 8

* PRECISION 0

* SCALE 0

FIELD MaxGenKw05

* ALIAS MaxGenKw05

* DATA TYPE Double

* WIDTH 8

* PRECISION 0

* SCALE 0

FIELD MaxGenKw06

* ALIAS MaxGenKw06

* DATA TYPE Double

* WIDTH 8

* PRECISION 0

* SCALE 0

FIELD MaxGenKw07

* ALIAS MaxGenKw07

* DATA TYPE Double

* WIDTH 8

* PRECISION 0

* SCALE 0

FIELD MaxGenKw08

* ALIAS MaxGenKw08

* DATA TYPE Double

* WIDTH 8

* PRECISION 0

* SCALE 0

FIELD MaxGenKw09

- * ALIAS MaxGenKw09
- * DATA TYPE Double
- * WIDTH 8
- * PRECISION 0
- * SCALE 0

FIELD MaxGenKw10

- * ALIAS MaxGenKw10
- * DATA TYPE Double
- * WIDTH 8
- * PRECISION 0
- * SCALE 0

FIELD MaxGenKw11

- * ALIAS MaxGenKw11
- * DATA TYPE Double
- * WIDTH 8
- * PRECISION 0
- * SCALE 0

FIELD MaxGenKw12

- * ALIAS MaxGenKw12
- * DATA TYPE Double
- * WIDTH 8
- * PRECISION 0
- * SCALE 0

FIELD Shape

- * ALIAS Shape
- * DATA TYPE Geometry
- * WIDTH 0
- * PRECISION 0
- * SCALE 0
- * FIELD DESCRIPTION
Feature geometry.
- * DESCRIPTION SOURCE
Esri
- * DESCRIPTION OF VALUES
Coordinates defining the features.

Metadata Details

- * METADATA LANGUAGE English (UNITED STATES)
- * METADATA CHARACTER SET utf8 - 8 bit UCS Transfer Format
- SCOPE OF THE DATA DESCRIBED BY THE METADATA * dataset
- SCOPE NAME * dataset
- * LAST UPDATE 2016-12-22
- ARCGIS METADATA PROPERTIES
 - METADATA FORMAT ArcGIS 1.0
 - METADATA STYLE FGDC CSDGM Metadata
 - STANDARD OR PROFILE USED TO EDIT METADATA FGDC
 - CREATED IN ARCGIS FOR THE ITEM 2016-12-22 12:48:25
 - LAST MODIFIED IN ARCGIS FOR THE ITEM 2016-12-22 13:29:59
 - AUTOMATIC UPDATES
 - HAVE BEEN PERFORMED Yes
 - LAST UPDATE 2016-12-22 12:48:25

Metadata Contacts ►

METADATA CONTACT

INDIVIDUAL'S NAME **Jim Kuiper**

ORGANIZATION'S NAME **Argonne National Laboratory**

CONTACT'S POSITION **Principal Geospatial Engineer**

CONTACT'S ROLE **processor**

CONTACT INFORMATION

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ADDRESS

TYPE **postal**

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CITY **Lemont**

ADMINISTRATIVE AREA **IL**

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COUNTRY **US**

E-MAIL ADDRESS **jkuiper@anl.gov**