Leveraging Guides to Empower Open Data Research

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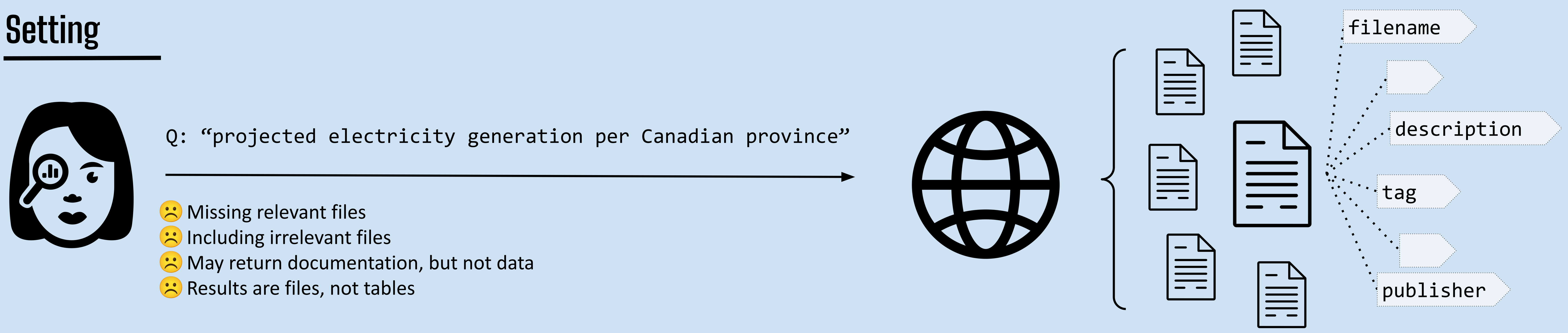
Setting



Q: “projected electricity generation per Canadian province”

- ☹ Missing relevant files
- ☹ Including irrelevant files
- ☹ May return documentation, but not data
- ☹ Results are files, not tables

Idea:

Empower table discovery: generate rich metadata by extracting data guides from documentation and linking them to tables found in files!

Attribute Guides:
- Name
- Title
- Description
- Unit
- Scale
- Datatype
- Domain

Table Search

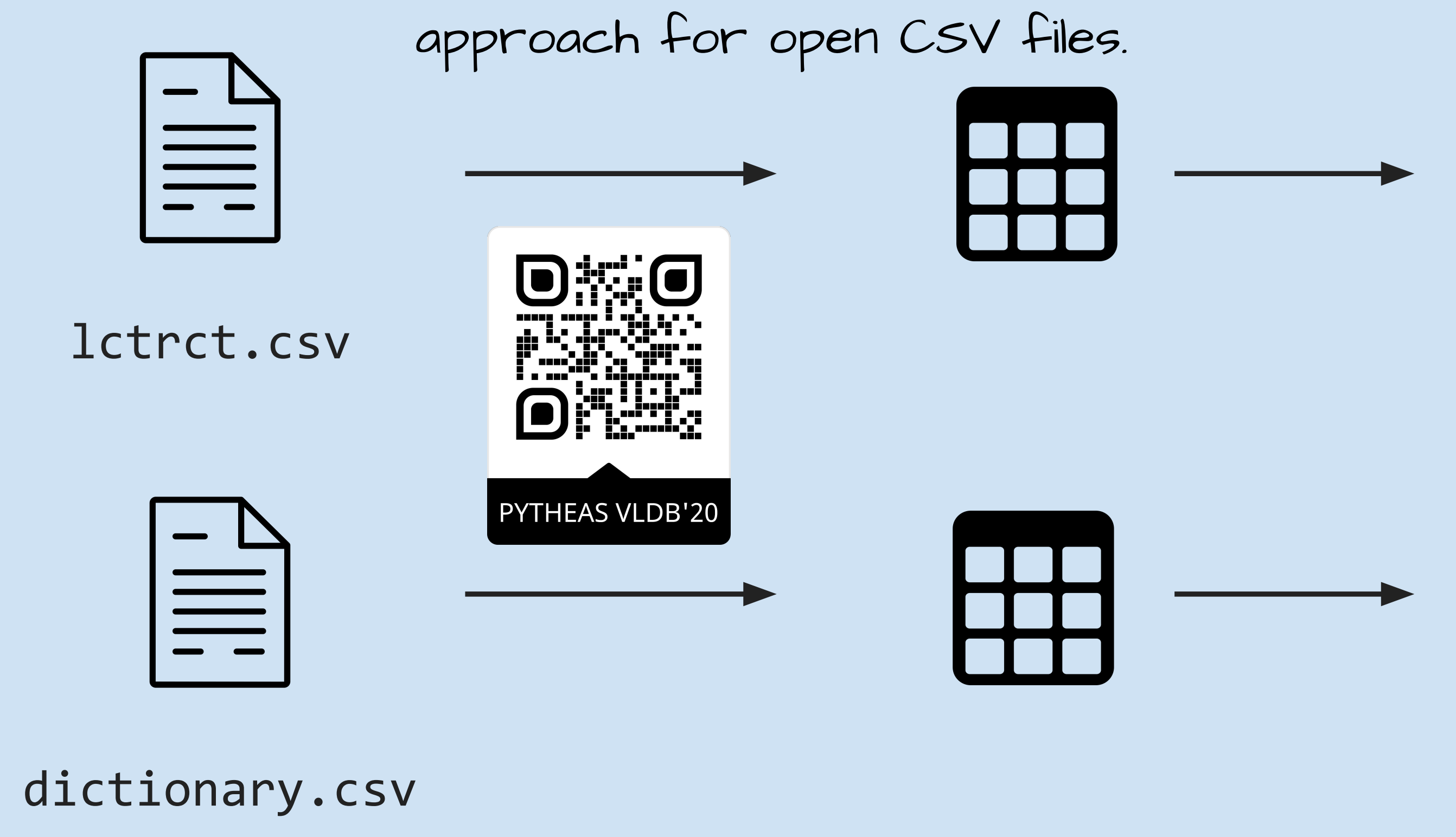
Integration

Interpretation

Value:
- Science
- Journalism
- Businesses
- Government
- ...

Example

Table discovery is challenging across file formats! We have introduced an approach for open CSV files.



Source	Area	Year	Data
Hydro	Alberta	2005	358386.9629
Biofuels/Biomass	Newfoundland and Labrador	2017	70
Natural Gas	Newfoundland and Labrador	2005	269
Solar/Wind/Geothermal	Nunavut	2040	94.6
Nuclear	Ontario	2017	90065.48

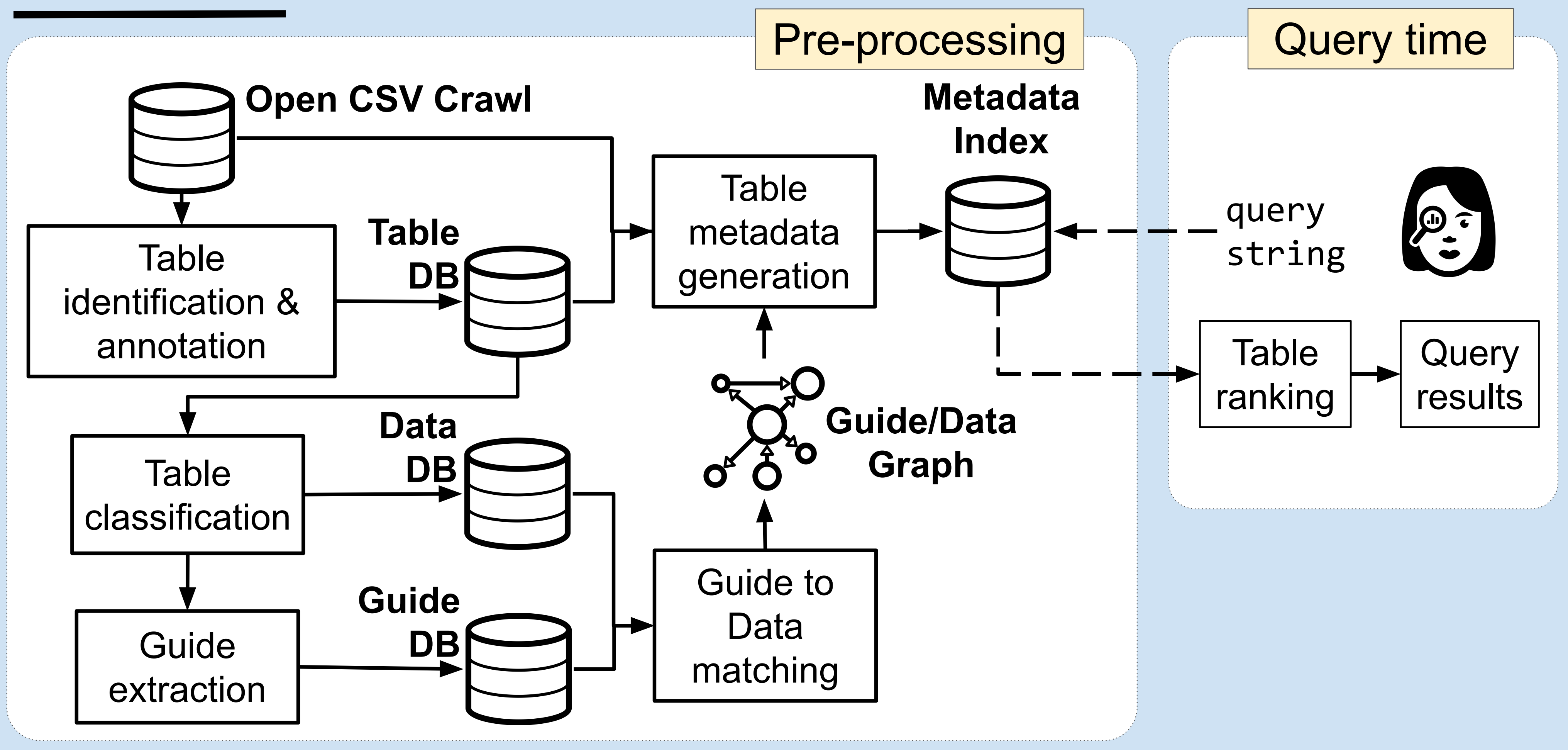
“Source refers to the various energy types used to produce electricity.”

“Province or territory.”

“Year that the data refers to. For end-use demand, 2005 to 2013 are historical numbers, while 2014 to 2040 are projected values.”

“Electric energy measured in GW.h is a billion (109) watt hours of electric energy per year. One GW.h is equal to 0.0036 petajoules.”

Design



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