



Ceres

Designed to plan the energy transition

Ceres is a new energy system planning solution that includes the latest developments

- It considers the volatility of renewables in the investment decisions which is key for assessing the needs for storage and interconnections
- Instead of using load blocks or typical days, it considers all hours (even sub-hourly) over the planning horizon to better quantify the infrastructure needs
- It is hosted in the cloud providing large computational capacity while offering low adoption costs, as one execution may require over 500 CPU-hours which are solved through parallel computing

It includes all features required to represent the economic dispatch of real-world energy systems

- Model thermal, renewables, hydro and storage
- Represents both transmission and distribution grids
- Also considers gas and hydrogen infrastructure
- Setup temporal resolution from 5 minutes up to hours
- Represent temperature-based start-up costs, non-convex heat rates, ramps, minimum online/offline times
- Use advanced algorithms for maximum performance

The solution covers a wide range of needs

- Development of long-term decarbonization scenarios of the energy sector covering electricity, coal, other fossil fuels, and hydrogen
- Development of electricity price scenarios for market assessments of renewable, thermal, nuclear and storage projects
- Development of least-cost grid expansion planning, considering the tradeoffs between grid expansion, storage, hydrogen and demand response

The adoption of encryption and robust authentication ensures the data is secure

- Our data is encrypted, uses secure communication and multifactor authentication

Pharoos is an independent advisory and technology firm that aims to support our clients addressing key problems of society leveraging the most innovative approaches and the latest technology

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