

Industry Outlook for Comprehensive Energy Services at Industrial Park-based Incremental Distribution Network

Power Sector Roundtable Serial Reports

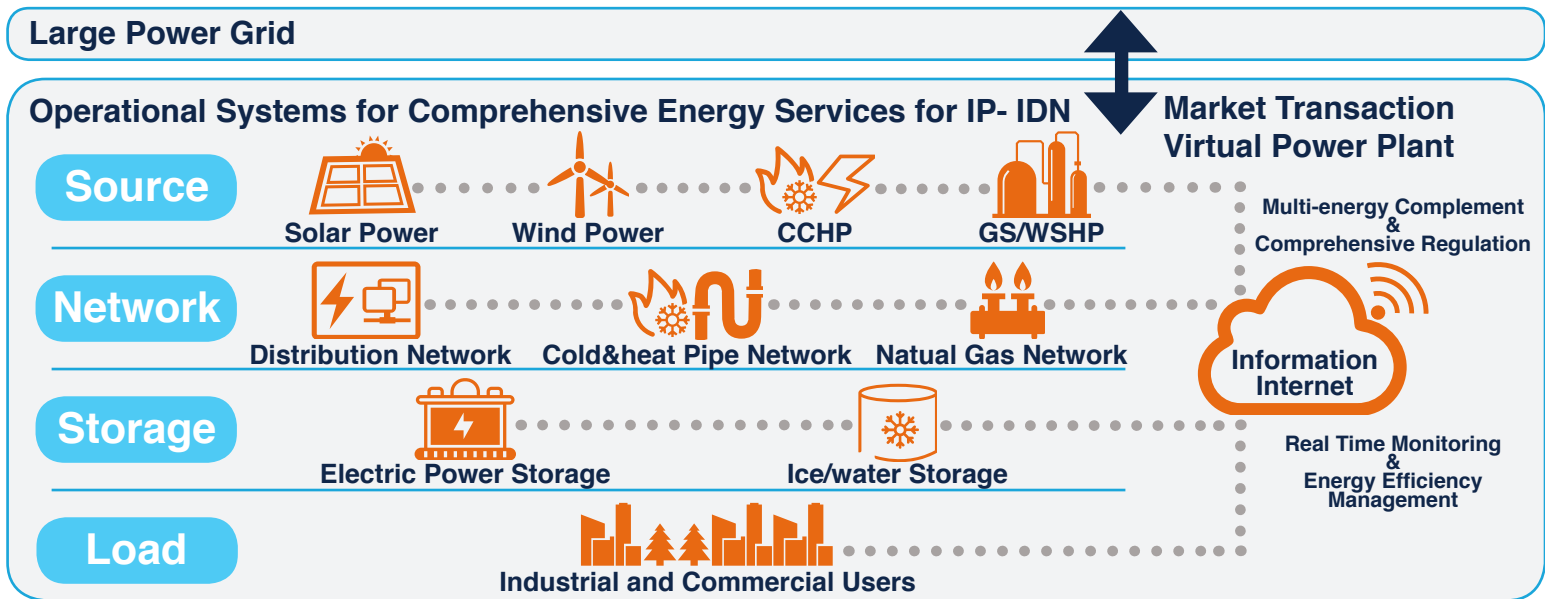
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China's Path to Incremental Distribution Networks (IDN) Reform

- Establishing energy supply service organizations in industrial parks (IP);
- Developing multiple modes of energy supply as microgrid, multi-energy complement, and comprehensive energy service;
- Providing differentiated services for different customer groups, and integrating the advantageous resources of multiple subjects;
- Innovating operations and business models for social capital to participate in energy market, to generate new economic growth points.

Operational Systems for Comprehensive Energy Services for IP- IDN

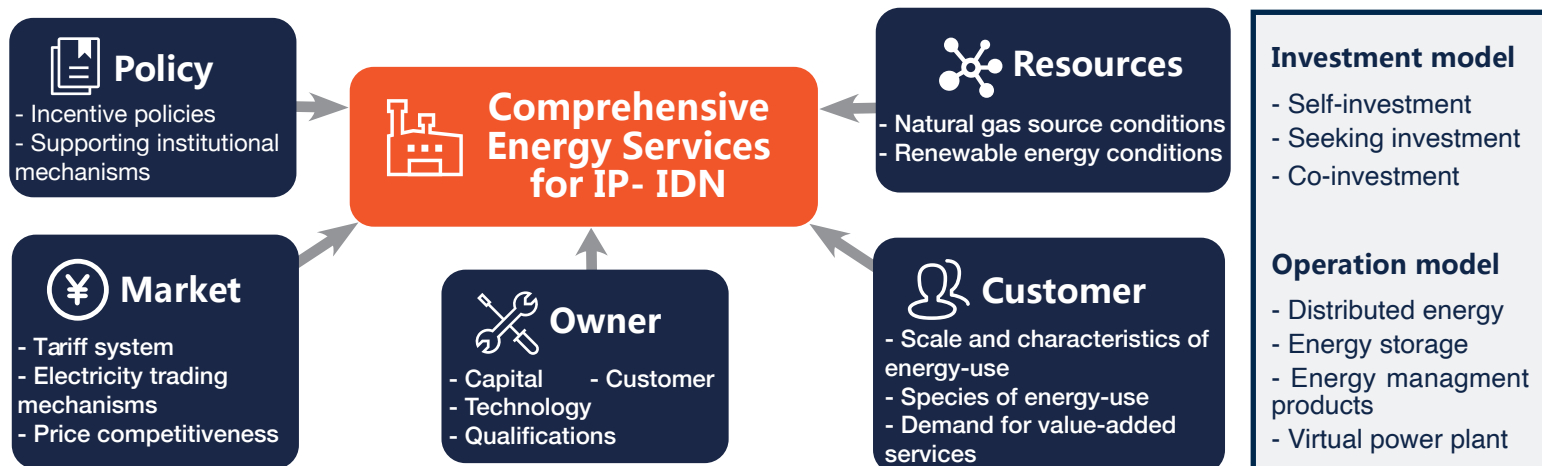
IDNs are the "the underlying infrastructure" for the development of comprehensive energy services. And comprehensive energy services are the "superstructure" on top of the IDNs for enhancing service quality and leading the greening and energy-saving of IDNs



Virtual Power System

With advanced technology, we will achieve a complementary balance between distributed power generation, energy storage systems, controllable loads, electric vehicles and other distributed energy sources within the IDN, while using the IDN as a virtual power plant to participate in the transactions of bulk power market (including electric energy market and ancillary services market) to compete with traditional large power plants.

Influencing Factors



Development Obstacles

- IDN reform pilots urgently need to expand options for profit-making.
- Policy support for Energy Performance Contracting (EPC) is somewhat lagging.
- The qualification review of comprehensive energy service companies that conduct EPC needs improvement.
- The reliance on IP-IDN comprehensive energy service providers on subsidies for renewable distributed generation is unsustainable.
- Intraday electricity price differences between peak and offpeak loads are yet to be reflected in the energy market, thus limiting service options for comprehensive energy service providers.
- The nascent ancillary service market cannot support the development of comprehensive energy services for the time being.
- Pilots for distributed generation trading platforms have yet to be established.
- Comprehensive energy service technology reserves and users' energy management awareness are still weak.

Policy Suggestions

- For governments at all levels, examine the conditions for developing comprehensive energy services within current IDN pilots and actively break down the institutional barriers according to practical difficulties.
- Include comprehensive energy services development conditions as one of the considerations in the preliminary screening of IDN reform pilot projects.
- Strengthen and standardize industry management, including a government registry of IDN comprehensive energy services projects, an authoritative energy-saving benefits evaluation system, and introduction of impact evaluation by independent third-parties.
- Issue fiscal and financial policies to promote the development of EPC projects.
- Encourage local governments to formulate incentive mechanisms for distributed renewable energy resources, such as rooftop photovoltaic, based on each province's resources.
- Accelerate the construction of an electricity spot market to inspire the diversification of comprehensive energy services.
- Select high-quality IDN projects to become distributed generation trading pilots.
- Lead by example through the development of comprehensive energy services by public institutions within IDN projects.
- Strengthen the awareness for energy-saving retrofitting among consumers within IDN projects.



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