



The Role of EPC **In Rebuilding Ukraine's Energy Infrastructure**

Energy Infrastructure Before, the Full-Scale Aggression of the Russian Federation Against Ukraine

Before the full-scale aggression of the Russian Federation against Ukraine, the Ukrainian energy infrastructure was already facing serious challenges - both in terms of the equipment used and overall inefficiency.

In 2015, the Cabinet of Ministers launched a reform program aimed at reducing accumulated debts, modernizing equipment and infrastructure systems, eliminating cross-subsidization, and promoting fair competition.



The infrastructural reasons behind this reform included the fact that **95% of thermal power plants had reached the end of their design life, 34% of 220–330 kV overhead transmission lines had been in operation for over 40 years as of 2007, and 76% of substations continued to operate beyond their intended service life.**



Damages to Ukraine's Energy Infrastructure During the Full-Scale Aggression of the Russian Federation Against Ukraine



330kV 200MVA Auto Transformer



Transformer Substation

Damages to Ukraine's Energy Infrastructure During the Full-Scale Aggression of the Russian Federation Against Ukraine



Thermal Power Plant



Wind Turbine

Damages to Ukraine's Energy Infrastructure During the Full-Scale Aggression of the Russian Federation Against Ukraine



Ukraine's upcoming transition from **GOST standards to IEC standards** in the energy sector will be of significant importance for future projects.

The damage to the existing energy generation, distribution, and transmission systems - along with insufficient energy production and similar challenges - highlights the importance of **solar and energy storage solutions** as the fastest, most efficient, environmentally friendly, and locally adaptable options for the renewal of the country's energy infrastructure.

During the renewal of Ukraine's energy infrastructure, the use of cutting-edge technologies, along with smart systems and communication networks, will be among the most important cornerstones of the new infrastructure - ensuring that the generation, transmission, and distribution of energy are traceable, monitored, and secure.

Why Should EPC be Preferred for Medium and Large-Scale Projects?

1. Integrated Responsibility

Under the **EPC (Engineering, Procurement, and Construction)** model, a **single entity** takes full responsibility for the entire project - from design and procurement to construction and commissioning.

- This **reduces coordination risks** among multiple contractors.
- The client benefits from a **single point of contact**, simplifying communication and accountability.

2. Cost and Time Certainty

EPC contracts typically operate on a **lump-sum, turnkey** basis.

- The contractor guarantees a **fixed cost and completion date**, which minimizes financial and scheduling uncertainty for the client.
- This is especially valuable for **medium and large-scale projects** where budget overruns and delays can have major impacts.



◀
24 MWp
Khmelnitsky,
Ukraine



▶
25,2 MWp
Khmelnitsky,
Ukraine

Why Should EPC be Preferred for Medium and Large-Scale Projects?

3. Risk Transfer to Contractor

In EPC projects, the **contractor assumes most of the project risks**, including:

- Design and engineering errors
- Procurement delays
- Construction challenges
- Performance and commissioning issues



16,2 MWp
Zhtomyr,
Ukraine



11,7 MWp
Kichevoy,
N. Macedonia

4. Streamlined Project Execution

Because design, procurement and construction are handled by one entity:

- **Interface issues** between engineering and construction teams are minimized.
- **Schedule optimization** is easier since all stages are managed under a single timeline.
- The EPC contractor can use **value engineering** to improve efficiency and reduce costs.

Why Should EPC be Preferred for Medium and Large-Scale Projects?

5. Enhanced Quality and Performance

EPC contractors typically maintain **consistent quality control** across all project phases.

- They ensure that all components and systems are designed and installed to meet **performance guarantees**.
- Commissioning and performance testing are usually part of the EPC scope, ensuring a **ready-to-operate facility** at handover.

6. Financial and Contractual Advantages

- Easier for clients to **secure financing**, as EPC contracts provide lenders with more predictable outcomes.
- Legal and administrative work is simplified due to a **single comprehensive contract**.
- Reduces disputes over scope and responsibility.



▲
11,5 MWp
Nikolaev,
Ukraine

▼
7 MWp
Ovocheva,
Ukraine

How to Choose the Right EPC Company?

1. Technical Expertise and Proven Experience

First and foremost, you must look at **technical capability and past performance**.

The EPC partner should have a **strong track record** in projects similar in **scope, technology, and scale** to yours. For example, a company experienced in **high-voltage substations or BESS systems** will understand the technical interfaces, grid codes, and safety requirements.

Experience brings efficiency and fewer surprises during execution.

2. Engineering and Design Capability

Good EPC companies invest heavily in **in-house engineering**.

They can take conceptual designs, optimize them, and develop full detail engineering quickly and accurately.

Look for a partner with **multidisciplinary design teams** electrical, civil, mechanical, automation all under one roof. Strong design capability ensures **constructability, cost control, and performance reliability**.



Khmelnytsky,
Ukraine

How to Choose the Right EPC Company?

3. Supply Chain and Procurement Strength

Procurement can make or break a project.

The right EPC partner should have **global sourcing networks** and established relationships with **reliable equipment manufacturers**.

They must be able to balance **cost, quality, and delivery time** especially in large-scale projects where logistics and import processes are complex. If the company can offer **local manufacturing or assembly**, that's an additional advantage for both cost and project localization.

4. Financial Stability

Large-scale projects require a partner with **solid financial capacity**.

They should be able to handle **large procurement packages, advance payments, and guarantees** without risk of delay.

Financial strength means the contractor can stand behind its commitments even under market volatility or currency fluctuation.



How to Choose the Right EPC Company?

5. Transparency and Partnership Approach

Finally, beyond technical and financial criteria, choose a company that values **collaboration and transparency**.

The best EPC partners don't just build projects they build **partnerships**. They share information openly, solve challenges together with the client, and are committed to **long-term success**, not just short-term profit.

The right EPC partner is **technically competent, financially strong, safety-driven, and locally engaged**.

They combine **engineering excellence with execution discipline** and act as a **true partner**, not just a contractor.



Khmelnytsky,
Ukraine



Zaychevska,
Ukraine

The Importance of EPC in Solar Power Plants - BESS - HV Substations and Transmission Lines

- **Single Point of Responsibility:**
EPC ensures full accountability - from design and procurement to construction and commissioning - reducing coordination risks.
- **Integrated System Design:**
Engineering excellence guarantees seamless integration of generation, storage, and transmission components for reliable grid operation.
- **Cost & Schedule Certainty:**
Turnkey EPC contracts provide fixed budgets and delivery timelines - essential for large-scale energy infrastructure.
- **Risk Transfer:**
Technical, commercial, and execution risks are shifted to the EPC contractor, protecting project owners and investors.
- **Performance & Quality Assurance:**
Standardized processes ensure high efficiency, safety, and compliance with international and local regulations.
- **Advanced Technical Capabilities:**
EPC expertise in BESS, PV, and HV systems ensures correct sizing, interconnection, control, and protection coordination.
- **Local Compliance & Grid Readiness:**
EPC partners manage permits, grid codes, and environmental standards for smooth project execution.
- **Long-Term Reliability:**
Professionally executed EPC projects deliver durable infrastructure, optimized performance, and lower lifecycle costs.

The Benefits of Combining EPC and Manufacturing Under One Roof

1. Seamless Integration and Coordination

When engineering, procurement, construction, and manufacturing are managed by the same organization, all processes are perfectly aligned.

This eliminates communication gaps between designers, suppliers, and builders ensuring faster decision-making and fewer interface problems.



2. Cost and Time Efficiency

An integrated EPC and manufacturing structure shortens project lead times by synchronizing production and site delivery schedules.

It also reduces procurement costs and logistics delays, resulting in more competitive and predictable project budgets.

The Benefits of Combining EPC and Manufacturing Under One Roof

3. Quality and Standardization

Manufacturing and EPC teams working together guarantee that every component is designed and built to match the project's technical specifications.

Quality control is unified from the factory floor to final commissioning, ensuring reliability and consistent performance.

4. Flexibility and Customization

Having both EPC and manufacturing capabilities allows the company to quickly adapt to project-specific requirements - from equipment design modifications to unique site conditions without relying on external suppliers.



The Benefits of Combining EPC and Manufacturing Under One Roof

5. Risk Reduction

Integrated responsibility means fewer external dependencies and reduced supply chain risks.

The same organization oversees design, production, & construction, ensuring accountability and smoother risk management.

6. Stronger Project Execution & After-Sales Support

An in-house EPC-manufacturing ecosystem enables faster troubleshooting, direct technical support, and reliable maintenance services throughout the asset's lifecycle.

Combining EPC and manufacturing under one roof creates a **powerful synergy** - delivering projects that are **faster, more efficient, higher in quality, and lower in risk**.

It represents a **strategic advantage** for companies seeking to provide turnkey, high-performance solutions in the energy & infrastructure sectors.



We believe that the rightful struggle of the Ukrainian nation will prevail. As a company investing and operating in Ukraine, we take great pride in considering it our duty to contribute in every possible way to the reconstruction of this beautiful country.

Ми віримо, що справедлива боротьба українського народу обов'язково переможе. Як компанія, що інвестує та здійснює діяльність в Україні, ми з гордістю вважаємо своїм обов'язком робити все можливе, щоб сприяти відбудові цієї прекрасної країни.



Where ever you need energy, we are there

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