ESCO + Energy management:
2023-24-results
2025-challenges+opportunities

Head of the Board

Oleksii Korchmit

NGO "Ukrainian Association of energy service companies"

712 ESCO contracts worth over UAH 2,6 billion concluded and implemented in Ukraine as of 2024

№	Регіон	К-сть укладених ЕСКО-договорів	Ціна ЕСКО-договорів
1	Kyiv region (+Kyiv city)	172	385 694 080,92
2	Odesa region	74	106 123 633,09
3	Volyn region	54	300 815 803,83
4	Kirovohrad region	48	200 705 321,47
5	Kherson region	42	361 428 427,98
6	Mykolaiv region	37	33 719 762,45
7	Dnipropetrovsk	34	160 964 952,23
8	Kharkiv region	26	66 370 408,07
9	Zaporizhzhia region	24	86 102 788,80
10	Khmelnytskyi region	23	75 476 244,61
11	Lviv region	18	73 219 671,52
12	Donetsk region	12	15 928 645,12
13	Sumy region	12	18 801 841,07
14	Chernihiv region	12	13 317 976,75
15	Luhansk region	10	9 230 354,63
16	Poltava region	10	47 023 306,58
17	Rivne region	8	19 134 968,79
18	-	7	8 090 137,60
19	Zhytomyr region	6	57 132 830,56
20	Cherkasy region	6	21 680 592,72
21	Vinnytsia region	3	13 295 193,04
22	Ivano-Frankivsk region	1	1 849 014,82
23	Zakarpattia region	-	-
24	Chernivtsi region	-	-
25	Ternopil region	-	-
	Total	639	**UAH 2 bln**

2023-24-Results

30 ESCO-solar power plant contracts concluded in 16 cities in 2023/2024, with support from the project

13 ESCO-SPP (solar power plant) contracts in hospitals

Price: $ 2mln
Savings: 13 %
Term: 13 years

Drohobych: SPP 144 kW
Kryvyi Rih (5): SPP 100 kW, SPP 40 kW, SPP 30 kW, SPP 40 kW, SPP 25 kW
Truskavets: SPP 105 kW
Yahotyn: SPP 50 kW
Cherkasy: SPP 40 kW
Yuzhnoukrainsk: SPP 55 kW

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22 contracts expected
Khmelnytskyi

17 ESCO-SPP (solar power plant) contracts in water facilities

Price: $ 8 mln
Savings: 18%
Term: 14 years

Korosten: SPP 100 kW
Vyshhorod: SPP 100 kW
Pervomaiskyi: SPP 350 kW
Chornomorsk: SPP 400 kW + **150kWh energy storage**
Lviv: SPP 600 kW + **350 kWh energy storage**
Chornomorsk: 110 kW

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11 contracts expected

ESCO-Solar station in Kryvyi Rih "Clinical Hospital №2"
Dnipropetrovsk region

40 kW
SPP capacity

71 000 kW
annual energy generation

21%
annual savings

380,000 UAH
annual savings

- UAH **360,000** (payment to ESCO as return of investment)
- UAH **20,000** (savings that remain for the hospital)

5 mln UAH
contract price

25 years
operation term

10 years
expected contract term
14,5 years (nominal term)

ESCO contract stage progress

1 mth	2 mth	3 mth	4 mth	5 mth	6 mth
Nov 2023	Dec 2023	Jan 2024	Feb 2024	Mar 2024	Apr 2024
ESCO tender announced	tender procedures		Contract signed	designing, purchases equipment, installs	SPP generation

ESCO-Solar station in Yahotyn "Central City Hospital"
Kyiv region

50 kW
SPP capacity

60 000 kW
annual energy generation

12%
annual savings

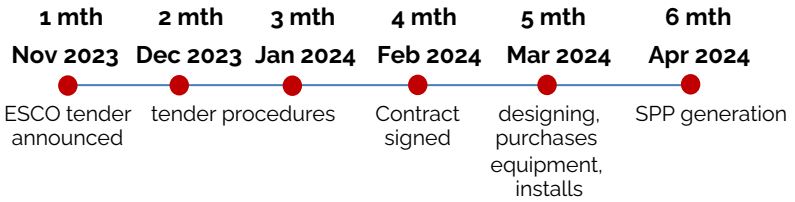
400,000 UAH
annual savings

- UAH **380,000** (payment to ESCO as return of investment)
- UAH **20,000** (savings that remain for the hospital)

25 years
operation term

10 years
expected contract term
15 years (nominal term)

ESCO contract stage progress



ESCO-Solar station in Korosten "Water sewage treatment facilities". Zhytomyr region

100 kW
SPP capacity

90 000 kW
annual energy generation

12%
annual savings

675,000 UAH
annual savings

- UAH **615,000** (payment to ESCO as return of investment)
- UAH **60,000** (savings that remain for the facility)

7 mln UAH
contract price

8 years
expected contract term
13 years (nominal term)

25 years
operation term


Korosten Water Facility SPP

ESCO-Solar station in Chornomorsk "Water sewage treatment facilities". Odesa region

400 kW
SPP capacity

520 000 kW
annual energy generation

23%
annual savings

10 years
expected contract term
15 years (nominal term)

25 years
operation term

150 kWh
energy storage

42,5 mln UAH
contract price

3,6 mln UAH
annual savings

- UAH **3,3 mln** (payment to ESCO as return of investment)
- UAH **0,2 mln** (savings that remain for the facility)


Chornomorsk Water Facility SPP

ESCO-Solar station in Vyshhorod "Water facility pumping station". Kyiv region

the project is at the SPP installation stage

150 kW
SPP capacity

200 000 kW
annual energy generation

1,5 mln UAH
annual savings

- UAH **1,3 mln** (payment to ESCO as return of investment)
- UAH **0,2 mln** (savings that remain for the facility)

10%
annual savings

14 mln UAH
contract price

8 years
expected contract term
12 years (nominal term)

25 years
operation term


Vyshhorod Water Facility SPP

ESCO-Solar station in Pervomaiskyi "Water facility 2nd pumping station". Kharkiv region

the project is at the SPP installation stage

350 kW
SPP capacity

3,4 mln UAH
annual savings

- UAH **2,8 mln** (payment to ESCO as return of investment)
- UAH **0,6 mln** (savings that remain for the facility)

375 000 kW
annual energy generation

28 mln UAH
contract price

26%
annual savings

25 years
operation term

8 years
expected contract term
12 years (nominal term)


Pervomaiskyi Water Facility SPP

Enhanced ESCO Partnership

Co-financing from the city and ESCO-investor.

Many communities receive solar panels as grant aid, but **do not have funding for procurement additional equipment and installation.**

Such works can be performed by ESCO under the enhanced partnership model.

Kryvyi Rih case:

The city received panels in 2023. It announced tenders in February 2024, and in April already successfully concluded energy service contracts for three hospitals for the installation of 25, 30, and 40 kW SPP. Expected savings in electricity vary from 10 to 24% and will amount up to 30,000 USD per year.

One of the projects has already been installed. Others plan to be launched in June-July this year.

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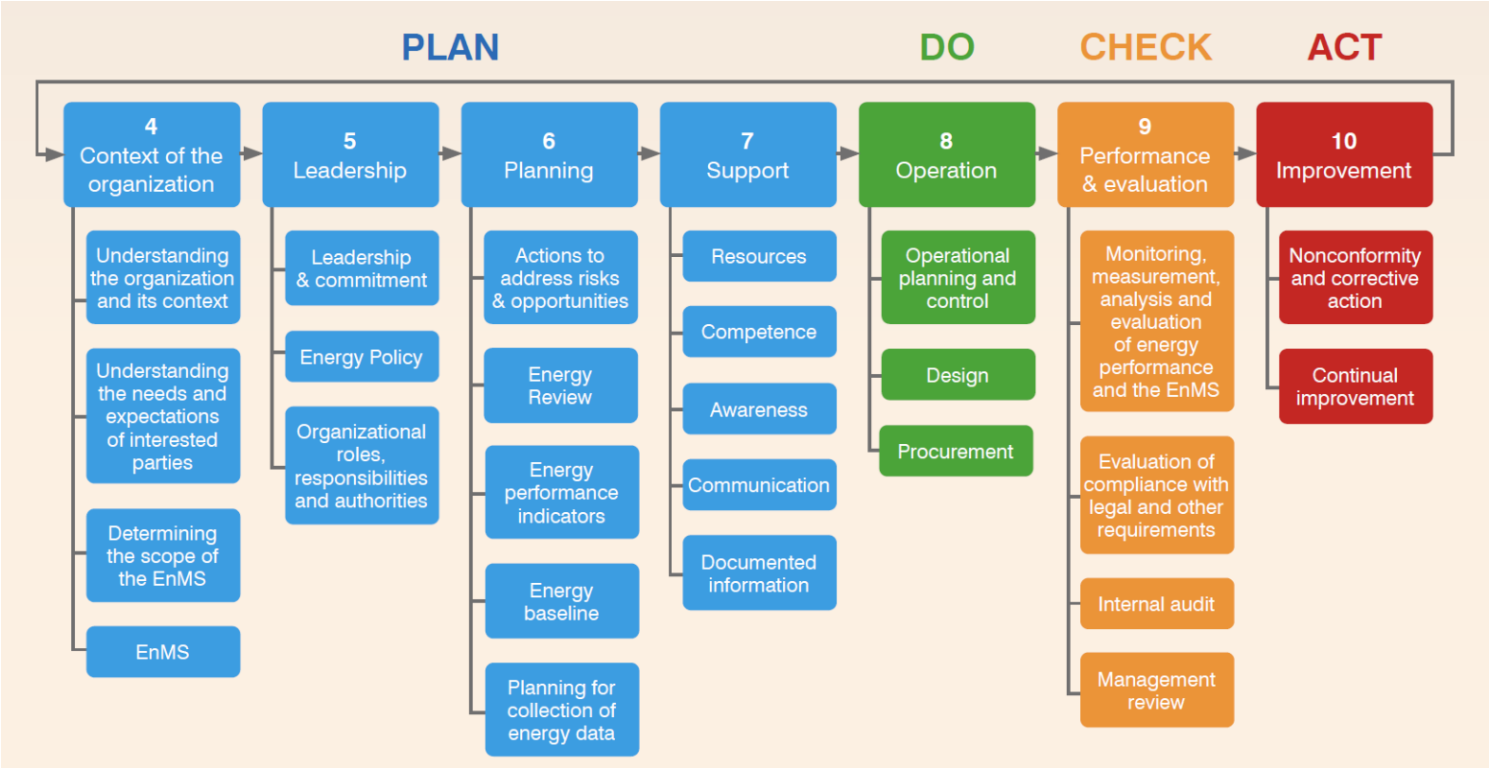
Академія TMS

Energy Management



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Академія TMS

A FRAMEWORK TO MANAGE ENERGY

An effective EnMS that is aligned with an organization's business strategy, will allow visibility of how energy is being used and areas where performance can be improved. It provides the structured policies, processes, procedures and action plans to implement energy saving opportunities. Continual improvement in energy management is therefore achieved.

COST REDUCTION

Any energy reductions identified through an EnMS will, in turn, offer demonstrable savings on energy bills, which will reduce the overhead of a business and in some cases substantially. There are many examples
of an organization undertaking the ISO 50001 process
achieving first year energy cost savings which are equal to or greater than the initial costs of implementing the Standard.

REDUCING ENERGY

Cost reduction as identified in b) above and reducing energy, go hand in hand. By establishing, implementing, maintaining and continually improving an EnMS, an organization will be able to not only deal with the initial energy saving opportunities or "low-hanging fruit" but to identify and manage where, when and how energy is being consumed and identify energy efficiency improvements and reductions.

CARBON REDUCTION

Many businesses report their output of carbon dioxide (CO2) or "carbon footprint". Whilst CO2 reduction cannot really be cited as a primary reason for achieving the ISO 50001 Standard, any reductions in energy will have a direct correlation with an organization's overall carbon footprint.

ORGANIZATIONAL ENGAGEMENT

The “top down” approach within ISO 50001 ensures that key senior stakeholders within the organization understand,as appropriate, its EnMS and are therefore motivated to achieve its objectives. ISO 50001 can be also be used to drive engagement on energy management; providing other members of an organization with a structured approach to managing energy use.

REGULATORY COMPLIANCE

Similar to ISO 14001 and ISO 45001, ISO 50001 requires an organization to identify and have access to applicable “legal and other requirements” in relation to its energy efficiency, energy use, energy consumption and its EnMS.

BENCHMARKING

ISO 50001 requires an organization to establish a baseline to act as an indicator of energy performance.
By identifying a baseline, energy efficiency can be tracked over time.

REPUTATION

Achieving ISO 50001 can offer significant reputational benefits by demonstrating to an organization’s stakeholders that it is fully committed to managing its energy consumption and seeking ways to increase its energy efficiency.

COMMERCIALITY

It is an ever increasing trend, that when seeking to supply goods and services to the business sector (particularly the Public Sector) accredited systems such as ISO 50001 are required, in order to meet pre contract procurement award criteria.

Академія TMS

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1.Context:
A comprehensive appreciation of an organization's processes
needs to be understood when considering the macro issues which interrelate between the organization and energy consumption.

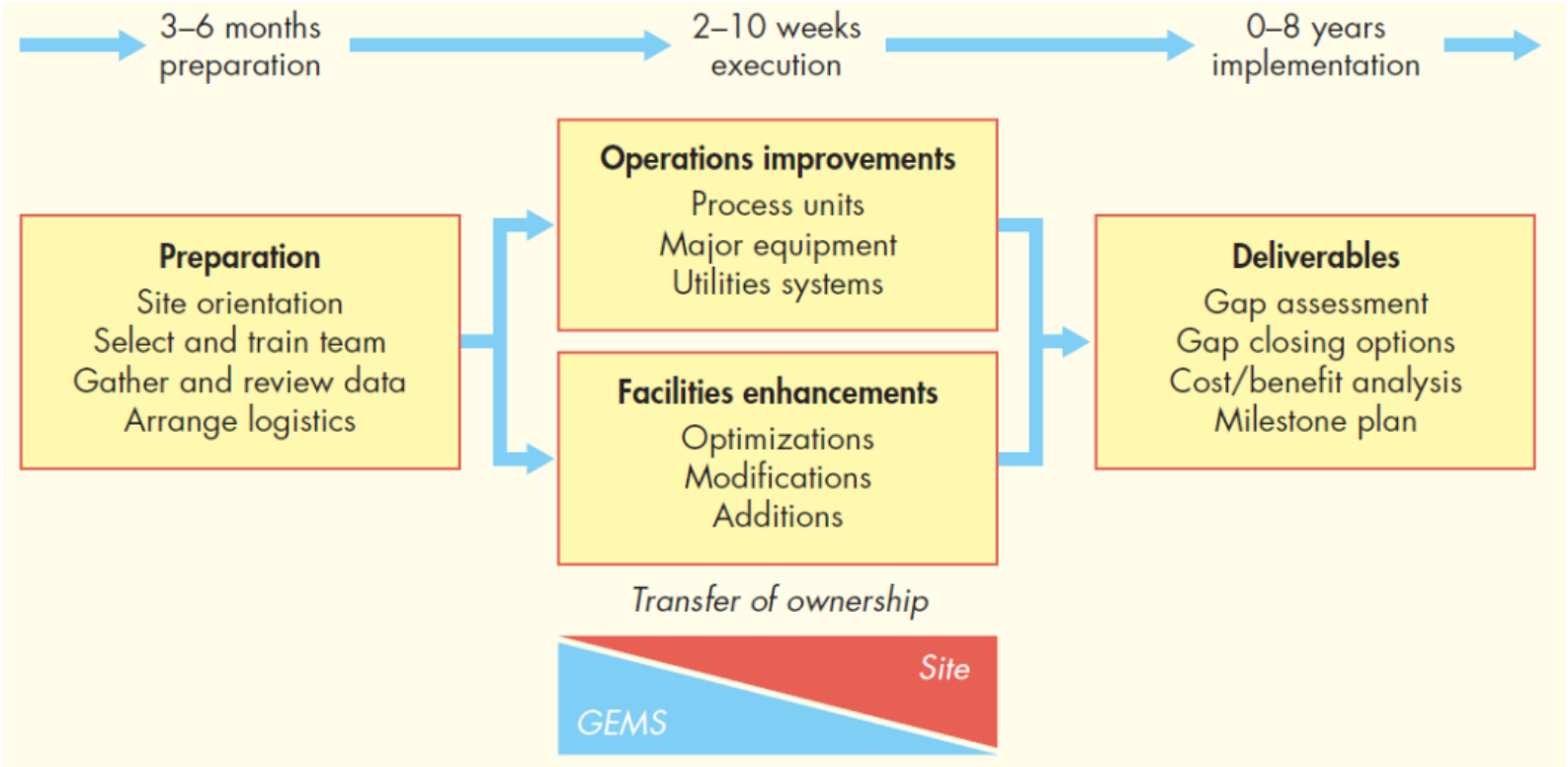
2.Energy review:
In order to determine a comprehensive assessment of the energy the current types and past and current energy use and consumption need to be analysed. This will draw out Significant Energy Uses (SEUs).

3.Performance and monitoring:
In order to determine energy performance, analysis of energy
data derived from the EnMS needs to be evaluated.

4.Support/competence:
In order to manage energy use/consumption, a person needs to be competent. When determining competence needs, competence will need to be obtained or matched to the needs of the particular energy using processes. If competence is not proven or appropriate to a particular process this could result in breaching legal requirements or energy performance being affected.

5.Internal audit:
The processes which comprise the EnMS need to be systematically audited over a time and frequency to determine whether they perform effectively.

6.Corrective action:
A corrective action is an opportunity to correct a problem identified in an EnMS. A process approach to this will start at root cause and finish at an appropriate and satisfactory sustainable solution.


3–6 months
preparation
2–10 weeks
execution
0–8 years
implementation
Preparation
Site orientation
Select and train team
Gather and review data
Arrange logistics
Operations improvements
Process units
Major equipment
Utilities systems
Facilities enhancements
Optimizations
Modifications
Additions
Deliverables
Gap assessment
Gap closing options
Cost/benefit analysis
Milestone plan
Transfer of ownership
Site
GEMS

Thank you!

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