

CURRICULUM VITAE

Proposed Position:

1. **Family name:** TARNOVSKYI
2. **First names:** MYKHAILO
3. **Date of birth:** 25/6/56
4. **Nationality:** Ukrainian
5. **Civil status:** Married
6. **Education:**

Institution	Zaporozhye Industrial Institute, Zaporozhye
Date: from (month / year) to (month / year):	1974 - 1979
Degree(s) or Diploma(s) obtained:	Industrial Heat Energy, Engineer

7. Language skills, mark 1 (worst) to 5 (best) for competence:

<i>Language</i>	Reading	Speaking	Writing
Ukrainian	5	5	5
Russian	5	5	5
English	3	3	3

8. **Membership of professional bodies:** Member of the Ukrainian department the International Association of Energy Engineers (AEE), a co-founder of the Association of Energy Auditors of Ukraine

9. Other skills:

<i>Name of establishment</i>	<i>Category</i>	<i>Years of Study</i>	<i>Certificates and Diplomas obtained</i>
Kiev Polytechnic Institute, Kiev	Technical Training	1998 2013	Energy Auditor
Association of Energy Engineers AEE	Technical Training	1998	Certified Energy Manager (CEM)
Association of Energy Engineers AEE	Technical Training	2015	Certified Energy Manager and Trainer(CEM)
UNIDO	Technical Training	2015	Certificate of Energy Management System User level Course
UNIDO	Technical Training	2015-2016	Certificate of UNIDO EXPERT Energy Management System
UNIDO	Technical Training	2017	Certificate of UNIDO Trainers User level Course

10. **Present position:** Founder and Director, OptimEnergO

11. **Years within the firm:** 22 years

12. Key qualifications (relevant to the project):

In 1998 Mr. Tarnovsky created one of the first ESCO in Ukraine, which operates on the principles of energy service international practices;

Mr. Tarnovsky has experience of implementing successful energy service contract on providing external energy management with guaranteed energy savings (for the first time in Ukraine);

Key technical expert in international projects USAID, GIZ, EBRD;

he also participates in the creation of a department for energy management at enterprises

Mr. Tarnovsky conducts courses in Energy Audit and Energy Management at National Technical

University "Kharkov Polytechnic Institute" in Kharkiv and participates in the creation of energy management departments at enterprises and in Ukrainian municipalities. He is also an initiator of the development and implementation of two-tier tariffs for heat energy in Ukraine.

13. Specific country experience:

Country	Date: from (month/year) to (month/year)
Russia	from Aug 2013 to Jul 2014
Ukraine	from 1978 to Present

14. Professional experience record (projects):

Date: from (month/year) to (month/year)	1998 – Present
Location	Ukraine
Company	PEF “OptimErgo”
Position	Director
Description	<ul style="list-style-type: none"> • The portfolio of the projects implemented by Mykhailo Tarnovskyi, who executed the first Ukrainian energy audits and energy management implementation in Kharkov since 1999. Since 2014, the introduction of an Energy Management System at Ukrainian enterprises is carried out in accordance with the requirements of the ISO 50001 standard. • The first Ukrainian ESCO-contract with a guaranteed energy saving with a private enterprise heat "TTSRP" in Kharkov. • exceeds 50 energy efficiency projects at various Ukrainian customers, Energy Management System implementation including: OJSC “Sumykhimprom”; JSC “Kozlovsky distillery”; JSC “Bogoduhyv meat plant”, Bogoduhyv, Kharkov region, Ukraine; JSC "UKRTATNAFTA", Kremenchuk, Poltava region, Ukraine; JSC "Berdyansk heating supply network enterprise; JSC "Pavlogradhimmash”, Pavlograd, Dnepropetrovsk region, Ukraine; JSC "Nikolaev aluminous plant", Nikolaev, Ukraine; District boiler-house (nonindustrial complex) of JSC "Nikolaev aluminous plant", Nikolaev, Ukraine; JSC -Pryluki, Pryluki, Chernigov region, Ukraine; MC “Brovaryteploenerhomerezha” , Brovary, Kiev region, Ukraine; DH department of OJSC “Motor sich”, Zaporozh'e, Ukraine; etc. • Carried out works on 5 plants - participants of this Project, Preliminary Energy Audit Reports and Investment Grade Audit Reports for OJSC “Sumykhimprom” and SE “Kozlivsky Alcohol Plant”. It was prepared the natural gas saving bankable projects for over USD15 million of investment for chemical and food industries; • Lecturing at National Technical University «Kharkov Polytechnic Institute» in Kharkov for Energy Audit, 2008 to 2013 years. <p><u>Participation in international projects:</u></p> <ul style="list-style-type: none"> • Project “Ukraine Industrial Energy Efficiency Initiative”, International Resources Group, Ltd. / USAID • Project “Municipal Heating Reform” International Resources Group, Ltd. / USAID. There were prepared energy audits of Heating supply systems of 10 cities of Ukraine under this Project by OptimErgo • Project “Sakha (Yakutiya): Support on Energy Efficiency and Energy Performance Contracting”, The Institute for Urban Economics/EBRD <p>Project “Ukraine Municipal Energy Reform Project (MERP)”, International Resources Group, Ltd. / USAID Assistance to 8 cities: the development of the SEAP, the organization of the System of Municipal Energy Management, development of technical specifications for the tender procedures IFO groups implementation of projects, development of the preliminary Feasibility Study for energy efficiency projects</p>

Date: from (month/year) to (month/year)	1997 – 1998
Location	Ukraine
Company	Burns and Roe Enterprises, Inc.
Position	Energy Management Expert
Description	<ul style="list-style-type: none"> As an Energy Management Expert implemented energy audits on 7 plants of Ukraine; Led the team of 4 engineers. Prepared audit reports and approved them with the plant management; Conducted energy management training at the plants; Initiated establishment of energy management departments; Identified energy efficiency equipment and participated in its procurement. <p>Supervised delivery and commissioning of the equipment.</p>

Date: from (month/year) to (month/year)	1995 – 1997
Location	Ukraine
Company	JSC “Intekhenergo”
Position	Director of foreign economic activity
Description	<p>The introduction of an Energy Management System During the work served energy audits of MC «Kharkovteplokomunenergo» and implemented Market Research of Kharkov city heat market. The results of this work: the Ministry of Housing, Ukraine, initiated the development and introduction of two rates tariffs for district heating municipal companies</p>

Date (from – to):	1992 – 1995
Location:	Ukraine
Company:	PPPE “Agroteploenergo”
Position:	Director
Description:	<ul style="list-style-type: none"> Worked for the energy efficiency reconstruction of boilers and heating networks. During this work fuel efficiency has increased from 10% to 30%; Developed and organized a production of hot-water boiler KT-75 with efficiency to 95% at the “Pavlogradhimmash” plant. This equipment is installed and working in Zaporozh’e, Kiev and Dnepropetrovsk regions.

Date: from (month/year) to (month/year)	1991 - 1992
Location	Ukraine
Company	MHE “Bogouslavteploset”
Position	Director
Description	<ul style="list-style-type: none"> Guided of DH works at 24 boiler houses in 6 cities of South-East part Kiev Region; Implemented an Energy Management System. Carriage out reconstruction of fifteen company boiler houses, resulting in fuel savings amounted to 30%; the company has increased its profitability from 5% to

Date: from (month/year) to (month/year)	1987 - 1991
Location	Ukraine
Company	DHE "Priazvokourortteploenergo"
Position	Director
Description	<ul style="list-style-type: none"> • Carriage out reconstruction of boiler houses energy equipment and resort heating networks, which resulted in fuel savings of 30% of total consumption. Through these activities additional entities were connected, the company became profitable from unprofitable to profitability 40%; • The introduction of an Energy Management System and ESCO contracting. Organization contracting for heating likeness two rates tariff; as a result the customer's energy-saving activities became profitable for the heating organization.

Date: from (month/year) to (month/year)	1984 - 1987
Location:	Ukraine
Company	The company "Kiev Engineering and Production Management"
Position	Senior Engineer
Description	<ul style="list-style-type: none"> • The introduction of an Energy Management System. Reconstruction of the power equipment of boiler and thermal networks enterprises petrochemical industry of Ukraine, which led to savings of 30% of total fuel consumption by factories and 50% energy savings for heating needs; The company served as ESCO sector.

Date: from (month/year) to (month/year)	1980 - 1984
Location	Ukraine
Company	The company "Berdyansk teploset" Zaporizhzhya region
Position	Director
Description	<ul style="list-style-type: none"> • The reconstruction of the power equipment of boiler 5 and 25 km of heat networks of the thermal area, resulting in savings of 20% of the total fuel consumption and 30% of electricity. • Monitoring and control system, depending on the heat consumption in the influential factor (outside air temperature) was founded. It is the basic element of energy management for heating systems.

Certification:

I, the undersigned, certify that to the best of my knowledge, these data correctly describe me, my qualifications and my experience.

Mikhail Tarnovskyi

Name of expert



Signature

26 January 2021

Date

Mikhail Tarnovskyi

Name of authorized representative
of the firm



Signature

26 January 2021

Date