

WOMEN ROLES AND REPRESENTATION AT CERNAVODA NPP

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Black Sea Women in Nuclear Network

Virtual Inaugural Workshop

November 29 – December 3, 2021

CONTENT

- Cernavoda NPP short history and achievements
- Major future projects
- Women roles and representation at Cernavoda NPP
- HR challenges



Cernavoda NPP

7 CURIOSITIES ABOUT BLACK SEA

1. Why do we call it "black"?

Over time, Greeks, then Romans - who called it Pontus Euxinus - and eventually Turks landed on its shores. They called it "Karadeniz", meaning the north sea, the dark sea (west), because it was positioned north of the Ottoman Empire. Therefore, its name comes strictly due to its geographical position on the map in relation to the Ottoman Empire.

2. It consists of two superimposed seas, one alive and one dead.

When we say that there are two seas in one, we mean that one layer of water has oxygen and another does not. The high content of hydrogen sulfide in the deep layers is one of the most important features of this sea. Due to the presence of this toxic gas, 85-90% of its water volume and about 65% of its total area are lifeless. What is worth knowing is that the sea has the warmest water in summer, in August.

3. Museum with artifacts in the depths

Where there is no oxygen, only hydrogen sulfide, no vertical currents are formed. The waters do not communicate with each other and remain almost dead. Therefore, the oxygen-free layer does not allow the decomposition of objects, ships or animal carcasses at a fast pace. Did you know that archeological artifacts have been found, kept almost intact at a depth of over 200 m?

4. It is the place of development for many new species

Being a closed sea, the Black Sea is home to many species that have remained intact. However, due to the ships that transit daily, the waters bring other species from other parts of the world that adapt immediately. For example, the white shells we find on the beaches of the coast were brought from other seas 50 years ago.

5. You can meet sharks

However, you should not be afraid. The species found in our country is called "sea dog" and measures about a meter, so it is a small shark. It lives at very deep depths, between 25m - 75m, where even for divers it is difficult to find it. It usually feeds on mackerel, gooseberries and anchovies. No worries, you will not meet him on the shore or at the water surface in Mamaia :-).

6. It is fertile for algae. Why?

Because our coast is near the mouth of the Danube into the sea. And the river contains the nutrients that algae feed on. Moreover, the Kaliakra Cape in Bulgaria serves as a barrier to the Danube waters, and the mariculture in the area favors the development of perennial algae.

7. Hide endangered species

Even if we don't have orcs, blue whales or seals in the Black Sea, there are some special species of flora and fauna that live here and are on the verge of extinction. Researchers in the coastal areas of the Black Sea say that over 160 species are threatened with extinction, including sea swallow, starfish, sturgeon, trout, lizard, Kaliakra seal, porpoise, stone crab, tuna.

What I can see from my window at home– BLACK SEA !!!!!



Where I spend my short vacation this week– Sânpetru, Brasov



SOCIETATEA NATIONALA NUCLEARELECTRICA S.A, CERNAVODA NPP SHORT HISTORY AND ACHIEVEMENTS

1. Cernavoda Project official started on 1979; 5 units, 2 on commercial operation up to now;
2. Societatea Nationala Nuclearelectrica S.A. (SNN) is a majority state owned company listed on the Bucharest Stock Exchange. The state owns 82,5% of Nuclearelectrica's shares, other shareholders – 17.5%.
3. SNN has two branches:
 - Cernavoda NPP Branch operating Cernavoda NPP Units 1 and 2 (CANDU technology) and the preservation of Unit 3, 4 & 5 until completion and commissioning (approx. 20% of total Romanian energy production). Starting November 2015 Cernavoda NPP Branch is a plant rated as Nuclear Excellence (INPO 1)*, the results reconfirmed in 2018 and 2021.
 - FCN - Pitesti, the Nuclear Fuel Plant - manufacturing nuclear fuel for Cernavoda NPP Units 1 & 2
4. On December 2, 2021 the Unit 1 celebrate 25 years of commercial operation.
5. More details on www.nuclearelectrica.ro

* The Institute of Nuclear Power Operations (INPO), headquartered in Atlanta, GA, is an organization established in 1979 by the U.S. nuclear power industry in response to the investigation of the Three Mile Island accident. An "INPO 1" is the most favorable score, and an "INPO 4" is an indicator of a nuclear station with significant operational problems.

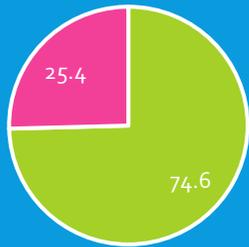
MAJOR FUTURE PROJECTS

- **Refurbishment of Unit 1** - Any nuclear unit has a limited lifespan, established by the project. In the case of units with CANDU technology, the projected lifespan is about 30 years. The project is scheduled to take place between December 2026 - December 2028.
- **November 25, 2021** - Nuclearelectrica announces the advancement of the CANDU 3 & 4 Units Project: Energonuclear SA, the project company, signed the first contract with CANDU Energy, Member of the SNC-Lavalin group and the Design Authority of Units 3 & 4 and OEM CANDU (Original Technology Manufacturer CANDU). Under the contract, CANDU Energy will provide engineering services for the development and updating of documentation necessary for the start of the CANDU 3 & 4 Units Project (including updating basic licensing documents, updating nuclear safety guidelines, updating the list of project changes with nuclear safety functions, etc.).
- **November 4, 2021** - At the United Nations Climate Change Conference, US Secretary of Energy Jennifer M. Granholm and Romanian Energy Minister Virgil Popescu announced that NuScale Power and Nuclearelectrica have signed an agreement to advance the implementation of innovative energy technology NuScale's small modular reactors.

As a result of this partnership, Romania has the potential to use for the first time in Europe the first small modular reactors and to become a catalyst for the development of SMR in the region, but also a basis for ensuring the operation of this new type of technology in other countries. A 6-module NuScale plant will avoid the release of 4 million tons of CO₂ into the atmosphere per year.

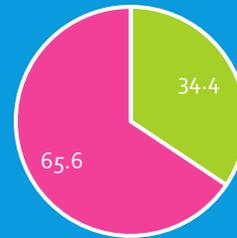
WOMEN ROLES AND REPRESENTATION AT CERNAVODA NPP

Distribution of gender – November 30, 2021 (%)



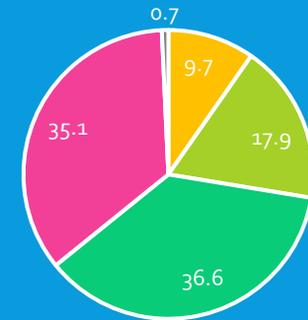
■ Men ■ Women

Distribution of studies %



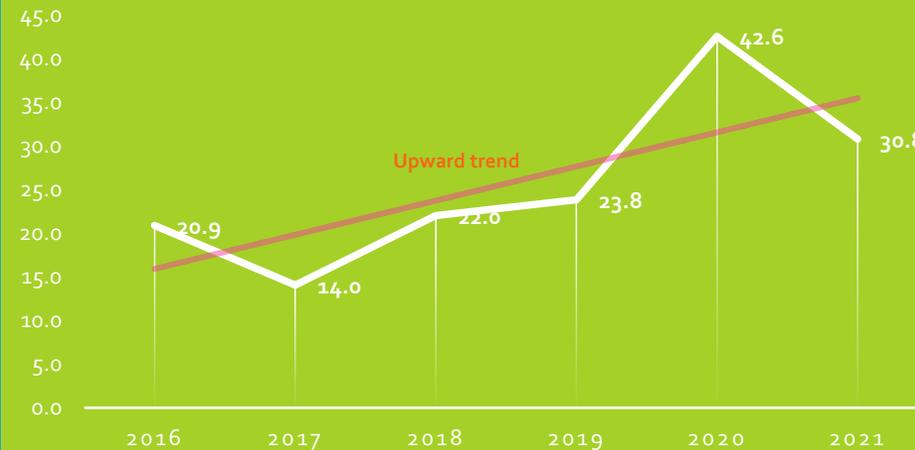
■ High school ■ universities

Distribution of women personnel on intervals of ages (%)

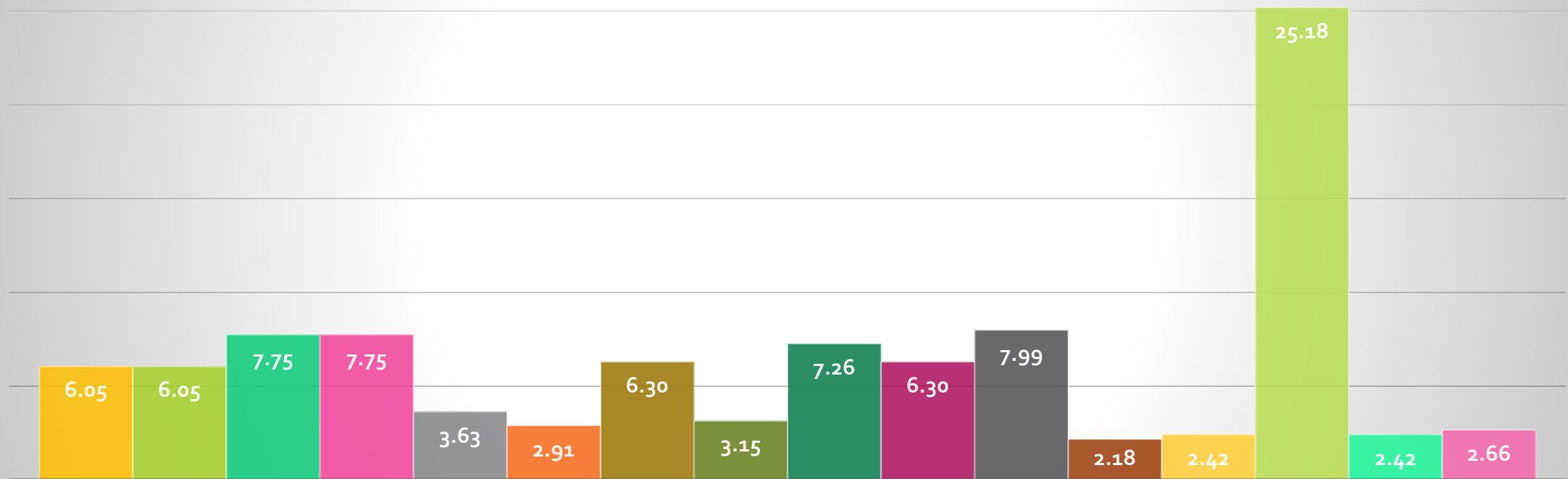


■ 20-30 ■ 31-40 ■ 41-50 ■ 51-60 ■ >60

WOMEN HIRED IN LAST 5 YEARS FROM TOTAL OF PERSONNEL HIRED (%)



Representation of women at Cernavoda NPP (% of women in that compartment from total of women)



%



HR CHALLENGES

After more than 25 years of experience, Cernavoda NPP faces a change of generation – many retirements due to permissive Romanian legislation which allows retirement from nuclear industry with a maximum of 13 years earlier than other personnel from non-nuclear industry. Therefore, organization had to develop a series of programs to assure:

- staff for the at least next 10 years
- a smoothly transition from one generation to other

using various selection methods and after that to develop this personnel such as

- the classic method of recruiting from the labor market,
- involving seniors in mentoring programs,
- awarding scholarships for students and pupils of vocational schools from the community (neighboring localities), also providing them practice at Cernavoda NPP,
- internship programs,
- apprenticeships,
- involvement in the development of school curricula adequate to the nuclear program through the national program "Educated Romania",
- development and periodical assessments of new leaders and their successors in the same time (a 4 years program).

PROVISIONS OF ROMANIAN LEGISLATION

- Women have 2 years vacation paid by state to grow each kids ; the fathers can take this vacation instead of mothers; at Cernavoda we have men who took vacation instead of their wives;
- During this period of time, employer can hire other personnel on a temporary basis contract.
- Women Day is celebrated on March 8 and at Cernavoda is a paid free day.

