

# **Algerian experience in renewable energies and Sonatrach's role in solar PV plants**

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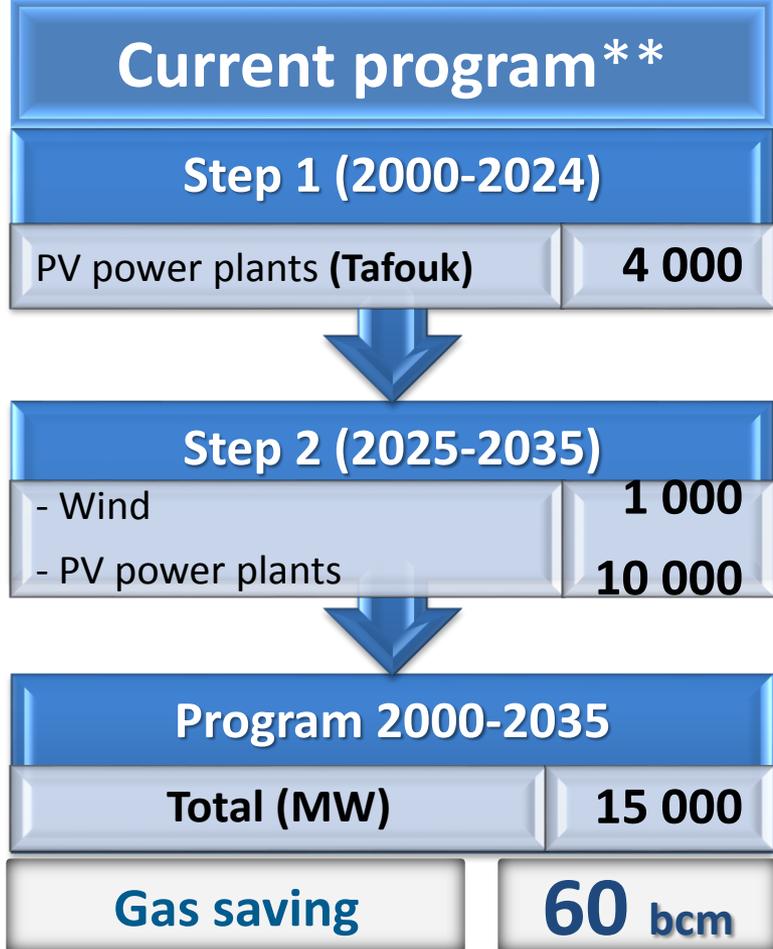
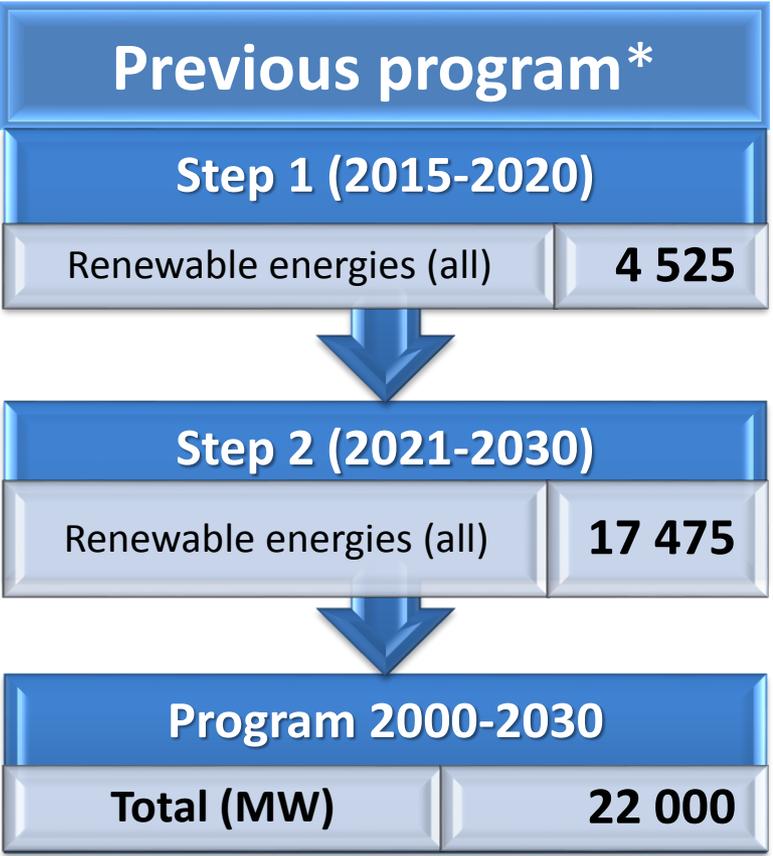
**REM 2020**

**"Transition path in the Mediterranean Area in a post Covid environment"**

**July, 2020**

# NATIONAL RENEWABLE ENERGY PROGRAM IN REVIEW (UNDER DISCUSSION)

## Previous program vs. current program



\*The National Program, initiated in 2011, was revised in February 2015, with a capacity of 22000 MW.

\*\* Pending confirmation by new Government in coming weeks. Investment up to \$3.6 billion



## Renewable Energy Programs

Sonatrach is fully in line with the National Renewable Energy Strategy. The Energy Transition is part of these main strategic thrusts; it is principally based on solar energy development.

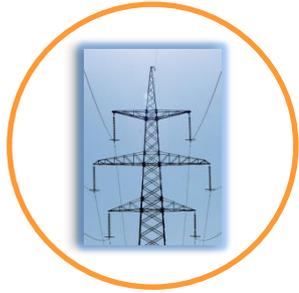
### 2 Solar photovoltaic programs

1.3 GW



PV power plants connected to Sonatrach sites

1 GW



PV power stations connected to the national power grid (Prime Minister's mandate) and conditioned by the implementation of associated regulations

# SONATRACH'S CONTRIBUTION TO NATIONAL RENEWABLE ENERGY PROGRAM

Sonatrach is implementing a 1.3 GW Photovoltaic solar power plant program with the objectives of:

- Produce electricity from a **new source** at an **optimum cost**.
- Gas saving volumes, *i.e.* nearly **600 million m3/year**.
- To commit to the **strategic axis of development** of renewable energies.

- for the implementation of this program:
- ① Identification of sites: a critical step in realizing the project
  - ② Preparation of Tender Documents.

**African Development Bank support**

**Agreement with Electricity and Gas Engineering Company (CEEG)**

**Key figures**

- ✓ **Investment:** \$700 to \$800 million
- ✓ **Electricity produced:** ~ 2.2 TWh/year
- ✓ **Gas savings:** ~ 600 million m3/year



## 1.3 GW Photovoltaic Solar Power Plant Program (Sonatrach)

- This program concerns the integration of photovoltaic solar power plants, first and foremost, into E&P power grids.
- An initial assessment has shown a potential of 1.3 GW which could satisfy nearly 80% of Sonatrach's electricity needs.
- Technico-economic studies to assess the profitability of each project based on :
  - ✓ Technical solution
  - ✓ Price of solar photovoltaic electricity compared to conventional electricity produced by gas turbines.
  - ✓ Valuation of gas to save.

## Partnership projects

### Sonatrach-Eni partnership

- ☐ Signature of a new MoU (in April 2020).

### Sonatrach-Total partnership

- ☐ New MOU under discussion.

The update of the 2015 renewable energy program was initiated in relation to:

- ✓ The decrease of costs for the photovoltaic and wind energy technologies considered to be mature. As renewables become cheaper, the current program seems more realistic and should be carried out at the best cost conditions.
- ✓ A better understanding of the different technologies and of the national potential in renewable energies.
- ✓ The persistent high costs of the CSP sector and its lower maturation.
- ✓ The completion of consistent and attractive regulations for investors in the public and/or private sector.
- ✓ The revision is based on the large-scale development and in priority of the photovoltaic and wind technologies and by integrating biomass, cogeneration, geothermal energy solar thermal progressively.
- ✓ The accelerated development of renewable energies could contribute to reduce domestic gas demand and consolidate gas exports.