



# Webinar on ' linking NAMA to INDCs ' Tunisian case

**30 July 2015**

Ons KHECHINE

# Content

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- **Tunisian context**
- **Tunisian GHG mitigation effort**
- **INDC Tunisian approach**

# Tunisian context



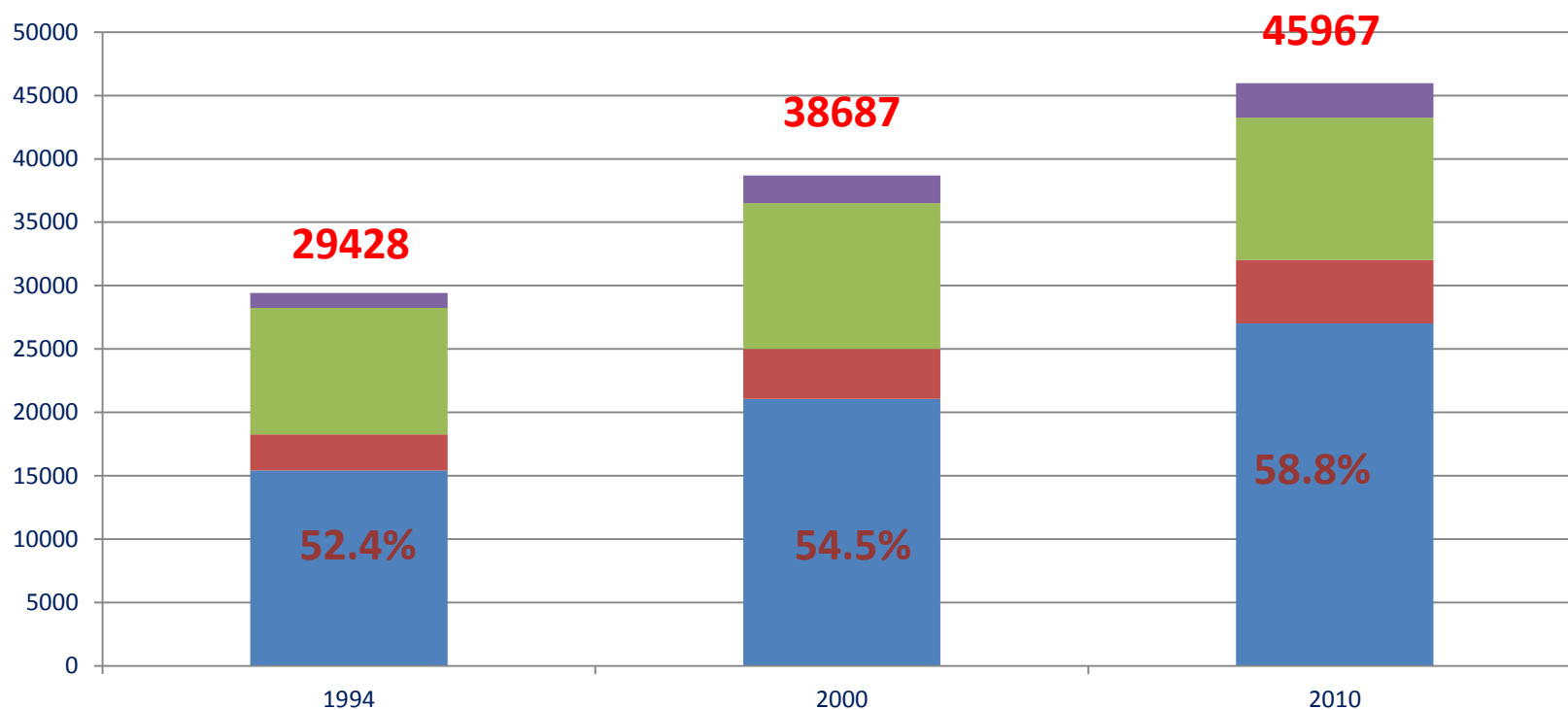
# Tunisian context

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- UNFCCC ratification :1993
- Kyoto Protocol ratification :2003
- National Communication: 1<sup>st</sup> : Oct. 2001  
2<sup>nd</sup> : Feb. 2014
- Climate Change National Strategy 2030-2050 : developed in  
2010
- Submission of the first BUR (Biannual report): 31Décembre  
2014

# Gross GHG emissions inventory

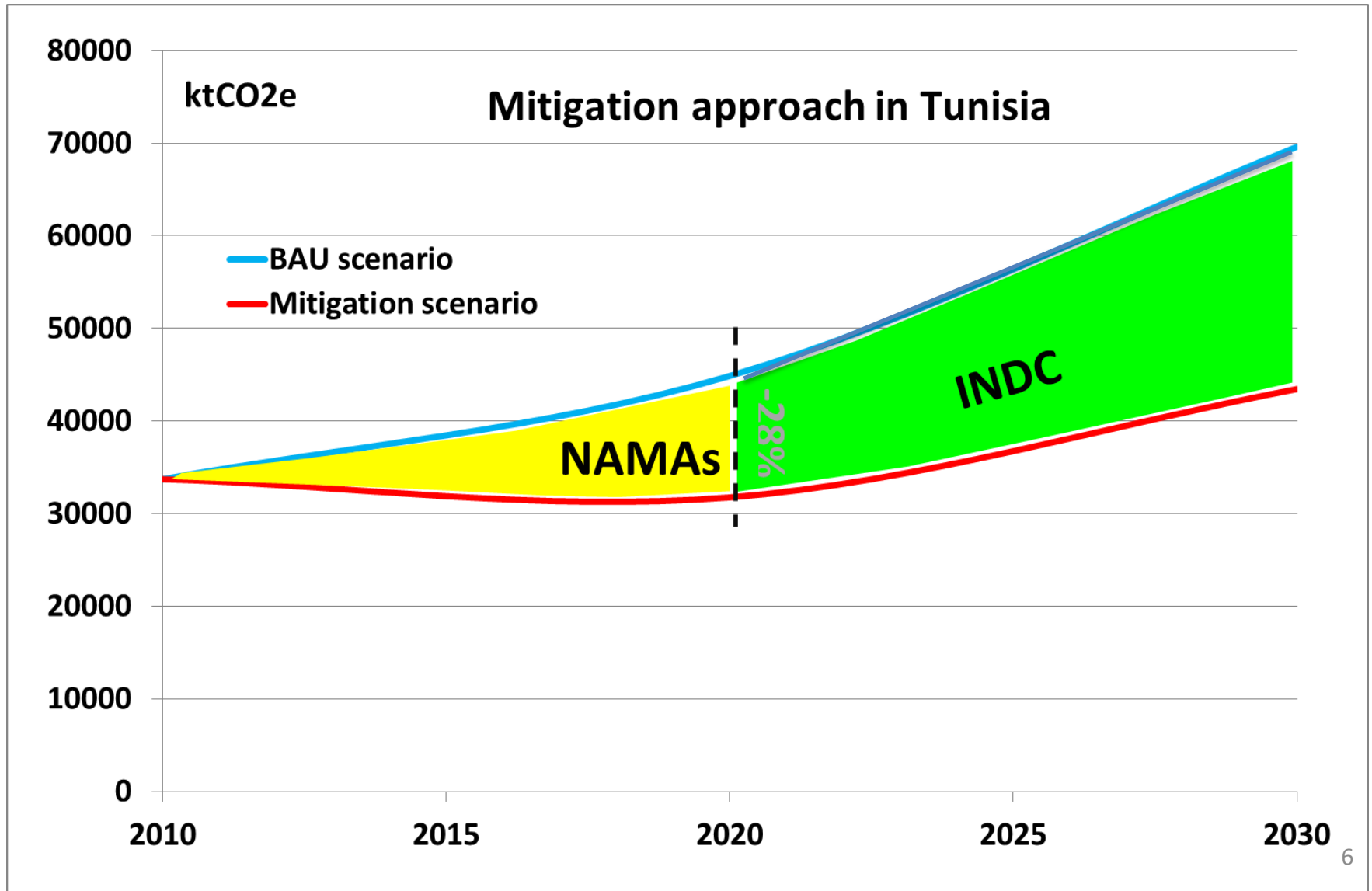
Kt<sub>e</sub>CO<sub>2</sub>



■ Energie ■ Procédés industriels ■ Agriculture, changements d'affectation des sols et forêts ■ Déchets

# GHG emissions mitigation road map in Tunisia

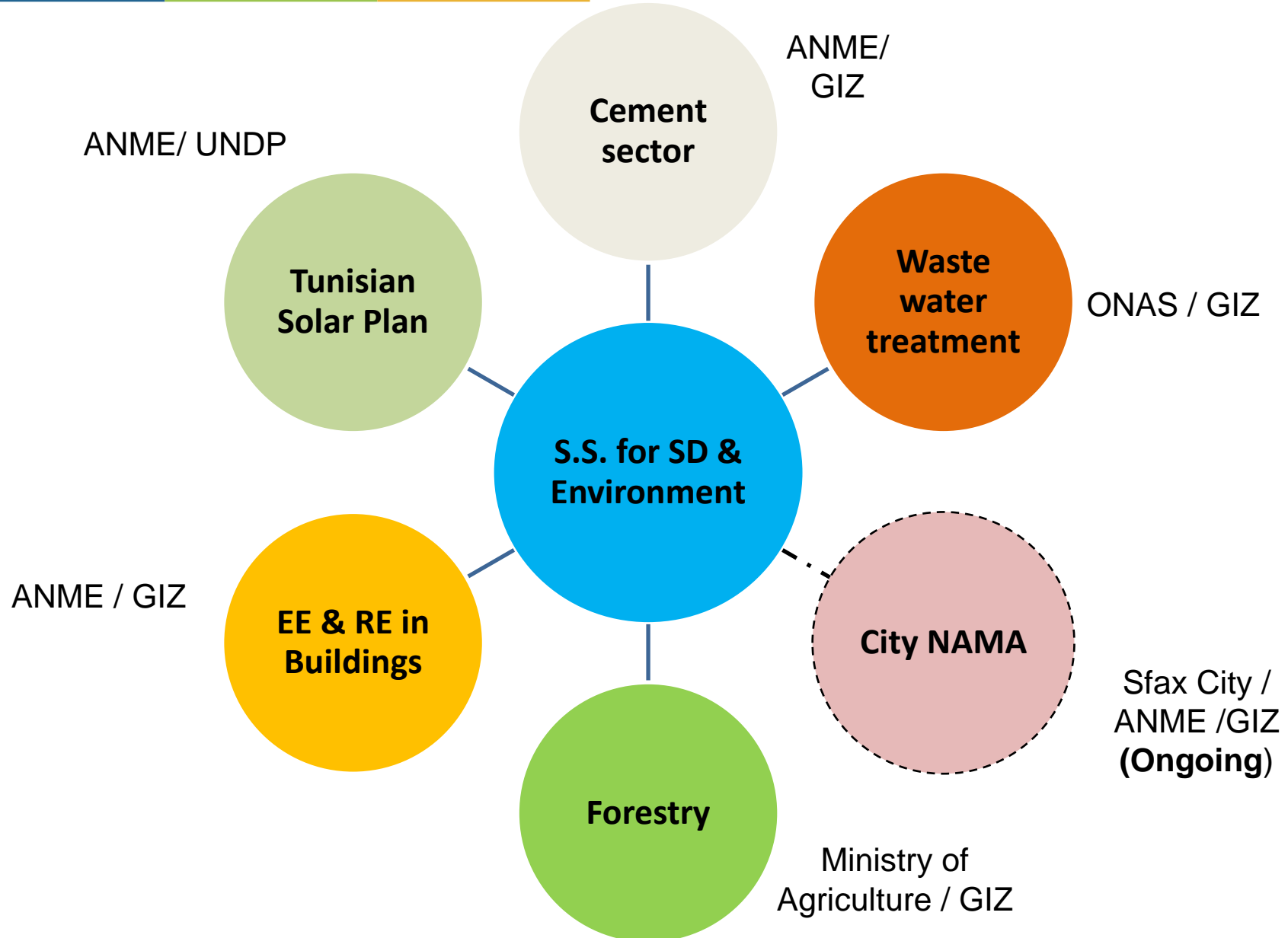
## From NAMAs to INDC...



# Tunisian GHG mitigation effort

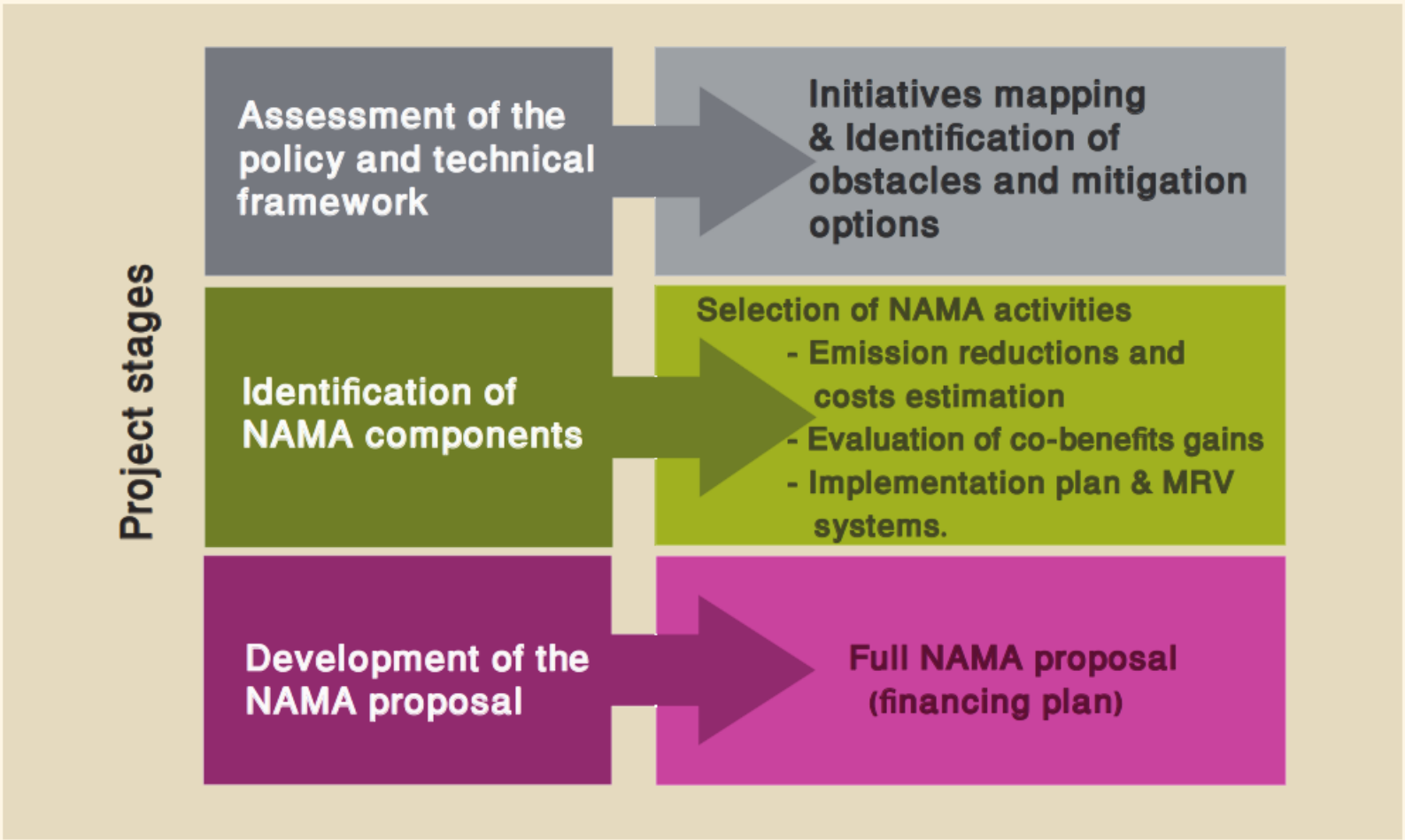


# Tunisian GHG mitigation effort: Developed NAMAs



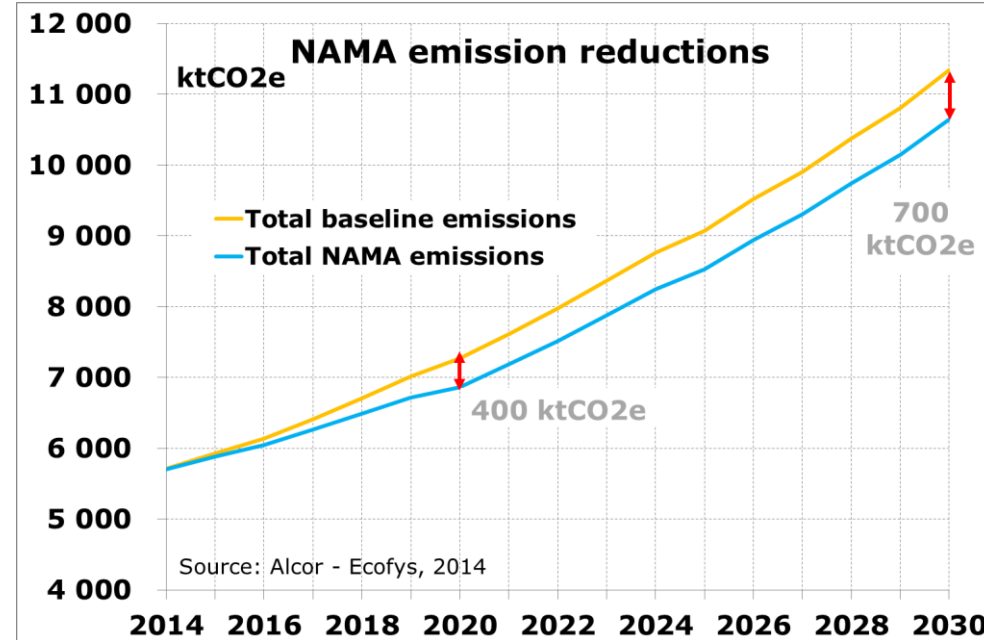


# Stages to develop NAMA



# Tunisian GHG mitigation effort: NAMA on EE & RE in buildings

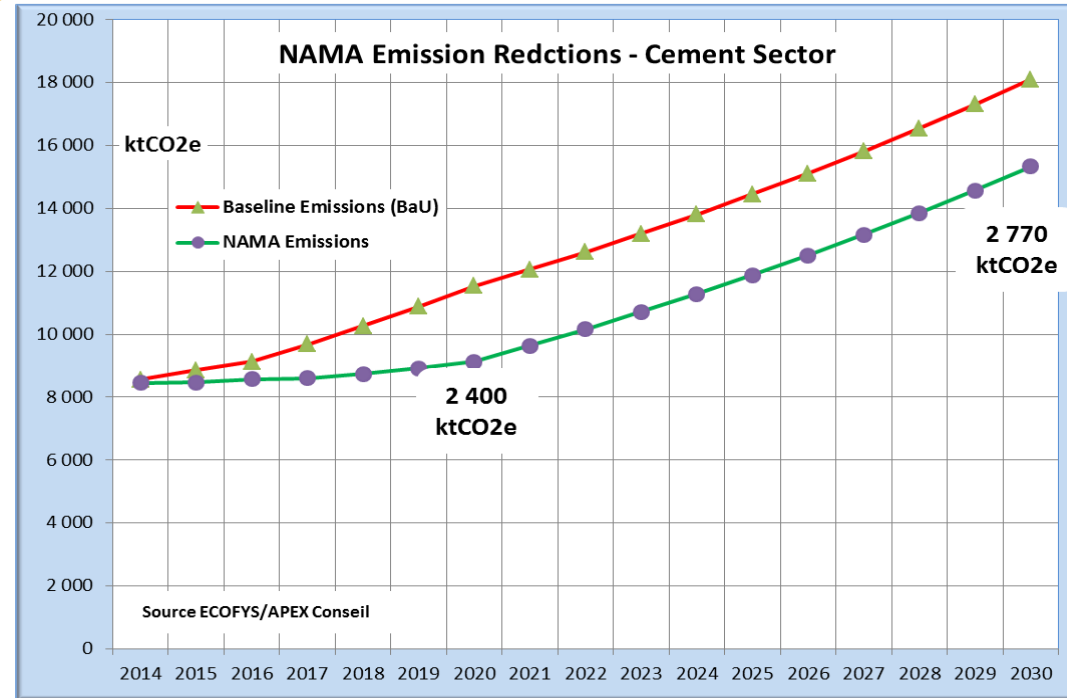
- **Objective:** Scale up energy efficiency and renewable energy measures in the building sector
- **Scope:** EE&RE in existing building (PV, SWH, insulation)
- **Components:**
  - Capacity building and technical assistance activities
  - Sustainable financial mechanism including: commercial loans, public subsidy (ETF), international donor support
- **Coordinating entity:** National Agency for Energy Conservation



<b>Emission reduction (MtCO<sub>2</sub>e)</b>	2015-2020: <b>1.2</b> 2015-2030: <b>6.8</b>
<b>Incremental investment cost</b>	680 M€
<b>Incremental investment cost tCO<sub>2</sub>e</b>	100 €/tCO <sub>2</sub> e
<b>Supporting financing from donors</b>	52 M€
<b>NAMA supporting activities</b>	4.7 M€

# Tunisian GHG mitigation effort: NAMA in cement sector

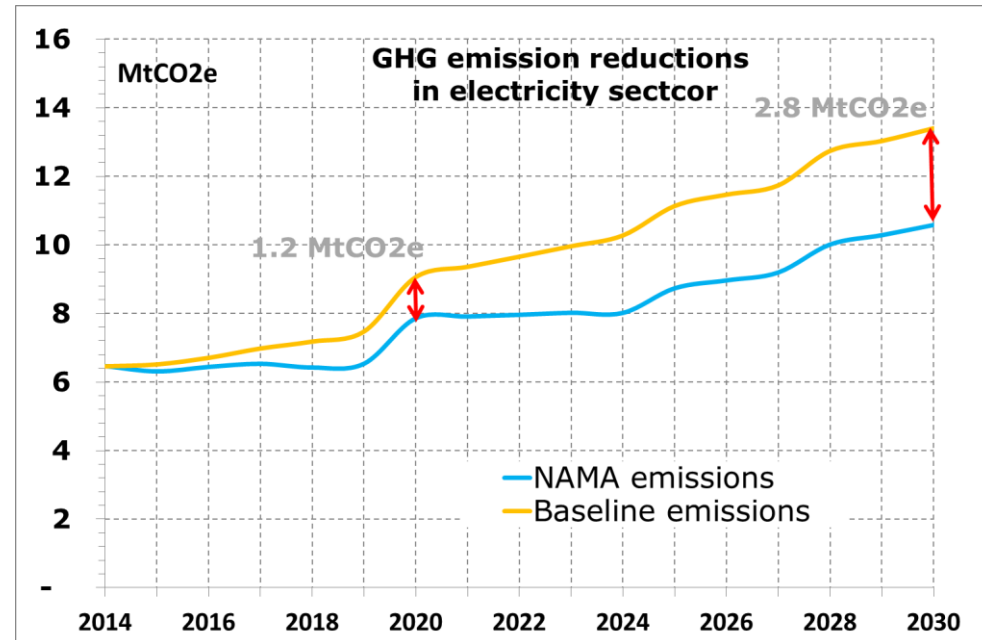
- **Objective:** Reducing GHG Emission Profiles in Cement sector in Tunisia
- Scope: EE&RE, Co-processing, Reduction of Clinker/Cement Ratio
- **Components:**
  - Capacity building and technical assistance activities
  - Result-based financial mechanism (Financial line, Investment Fund)
  - Unlocking Regulatory Barriers to Wind Power, Co-processing and Cement market Segments
- **Coordinating entity:** National Agency for Energy Conservation



<b>Emission reduction (MtCO2e)</b>	2014-2020: <b>8.0</b> 2014-2030: <b>33.9</b>
<b>Incremental investment cost</b>	970 M€
<b>Incremental Investment Cost per tCO2e</b>	29 €/tCO2e
<b>NAMA supporting activities</b>	8.5 M€

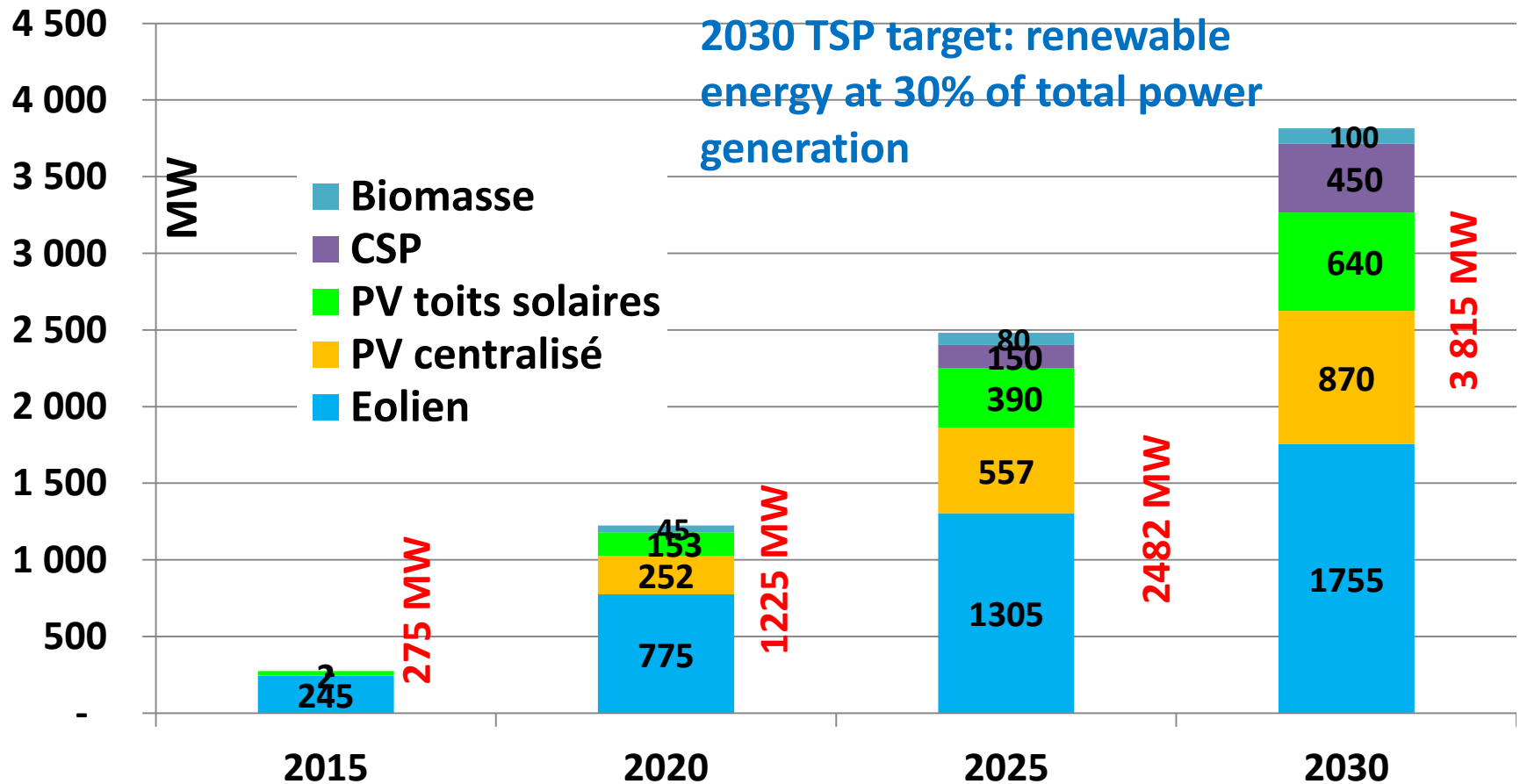
# Tunisian GHG mitigation effort: Tunisian Solar Plan (TSP) NAMA

- **Objective:** Scale up of RE sources use in electricity sector
- **Scope:** Wind, CSP, biomass and PV (including PV roof installations)
- **Components:**
  - Capacity building and technical assistance activities
  - Sustainable financial mechanism including: private investment, public subsidy (ETF), public investment and international donor support
- **Coordinating entity:** National Agency for Energy Conservation



<b>Emission reduction (MtCO<sub>2</sub>e)</b>	2015-2020: <b>3.8</b> 2015-2030: <b>27</b>
<b>Incremental investment cost</b>	4700 M€
<b>Incremental cost per tCO<sub>2</sub>e</b>	175 €/tCO <sub>2</sub> e
<b>Supporting financing from donors</b>	500 M€
<b>NAMA supporting activities</b>	1.1 M€

# Tunisian GHG mitigation effort: TSP NAMA Overview/ RE installed capacity



# Tunisian GHG mitigation effort: Recapitulation

NAMAs	GHG reductions over 2015-2030 (MtCO <sub>2</sub> e)	Incremental Investment cost (M€)	NAMA supporting activity cost (M€)	Investment cost (€/tCO <sub>2</sub> e)
<b>NAMA in building sector</b>	<b>6.8</b>	680	4.7	100
<b>NAMA in cement sector</b>	<b>33.9</b>	970	8.5	29
<b>NAMA in waste water treatment sector</b>	<b>3.5</b>	580	1.2	165
<b>Forestry and Land-Use Change</b>	12.7	415	12.7	6.2
<b>NAMA for TSP</b>	<b>27</b>	4,700	1.1	175
<b>TOTAL</b>	<b>83.9</b>	<b>7,345</b>	<b>28.2</b>	<b>87,5</b>

# INDC Tunisian approach



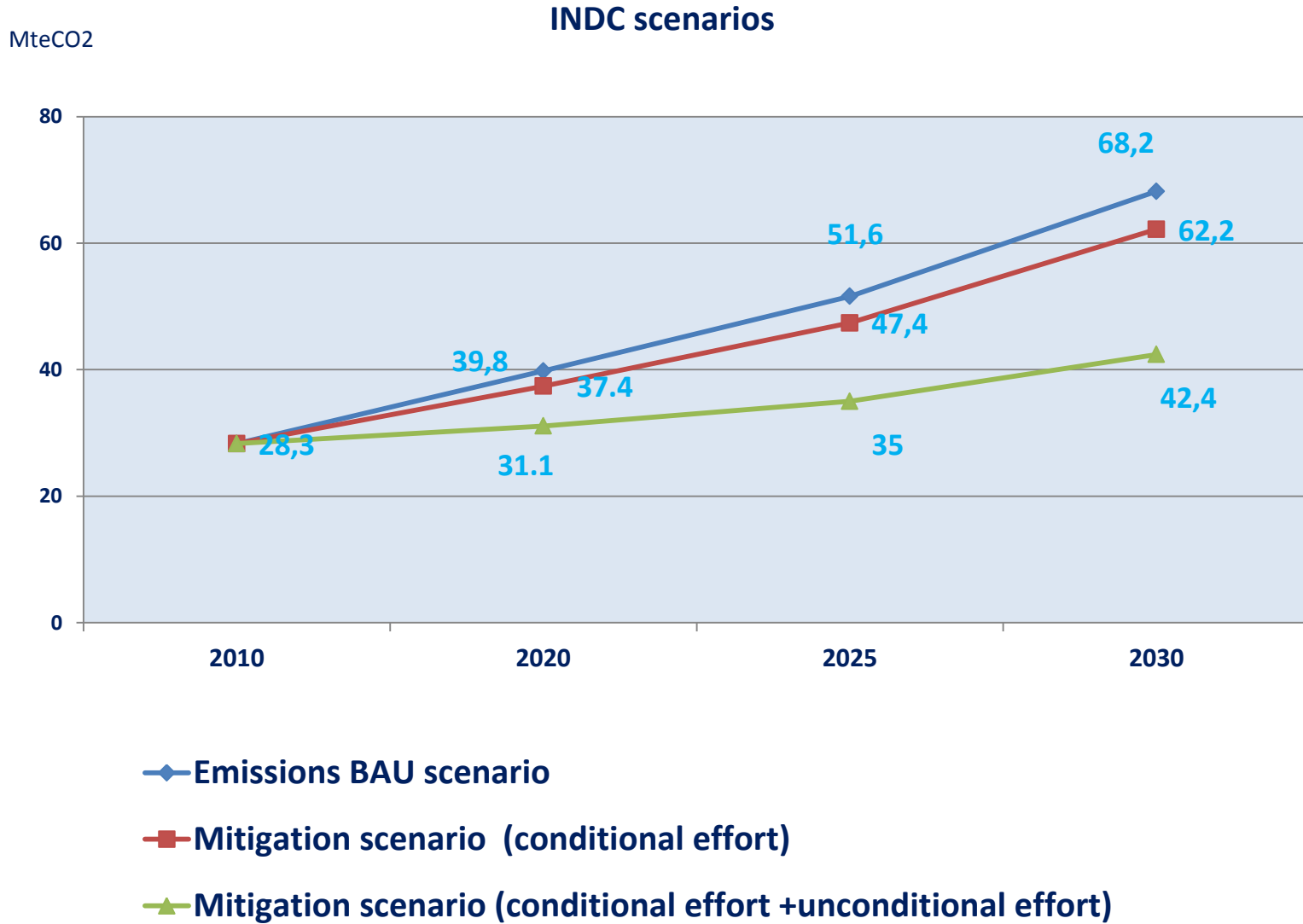
# INDC simulations

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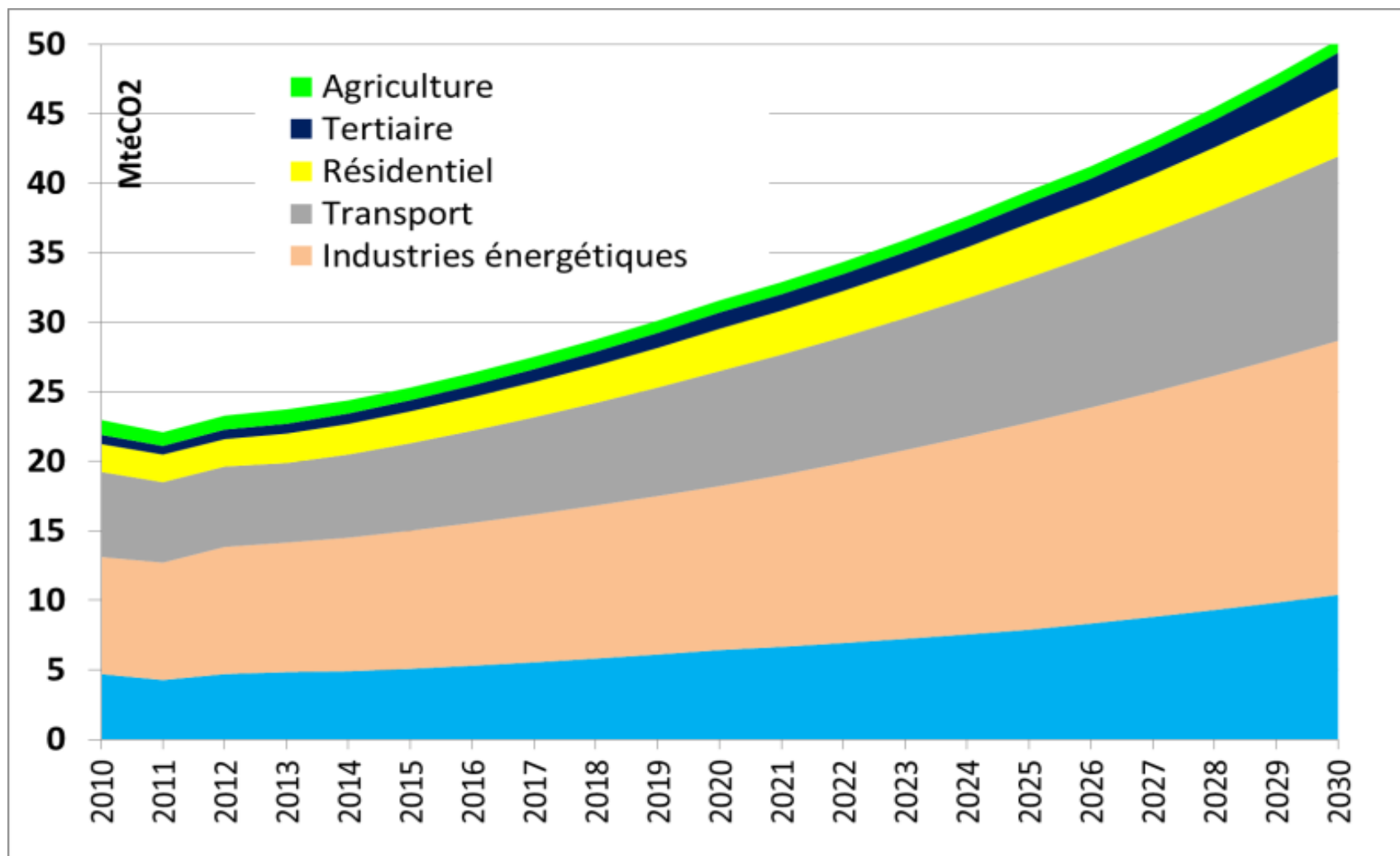
- **Timeline targets** 2020-2025-2030
- BAU scenario + Mitigation Scenarios
- Bottom-up approach: Med -Pro Environment model
- Developed within WRI guidance document for designing and preparing INDCs.
- **Targeted Sectors**
  - Energy Efficiency + Renewable Energies
  - Industrial processes
  - AFOLU
  - Wastes
- **BAU**: Includes usual implemented mitigation activities
- **Mitigation Scenario**
  - Includes recently identified NAMA activities
  - Need for support from Post-Kyoto financial mechanisms



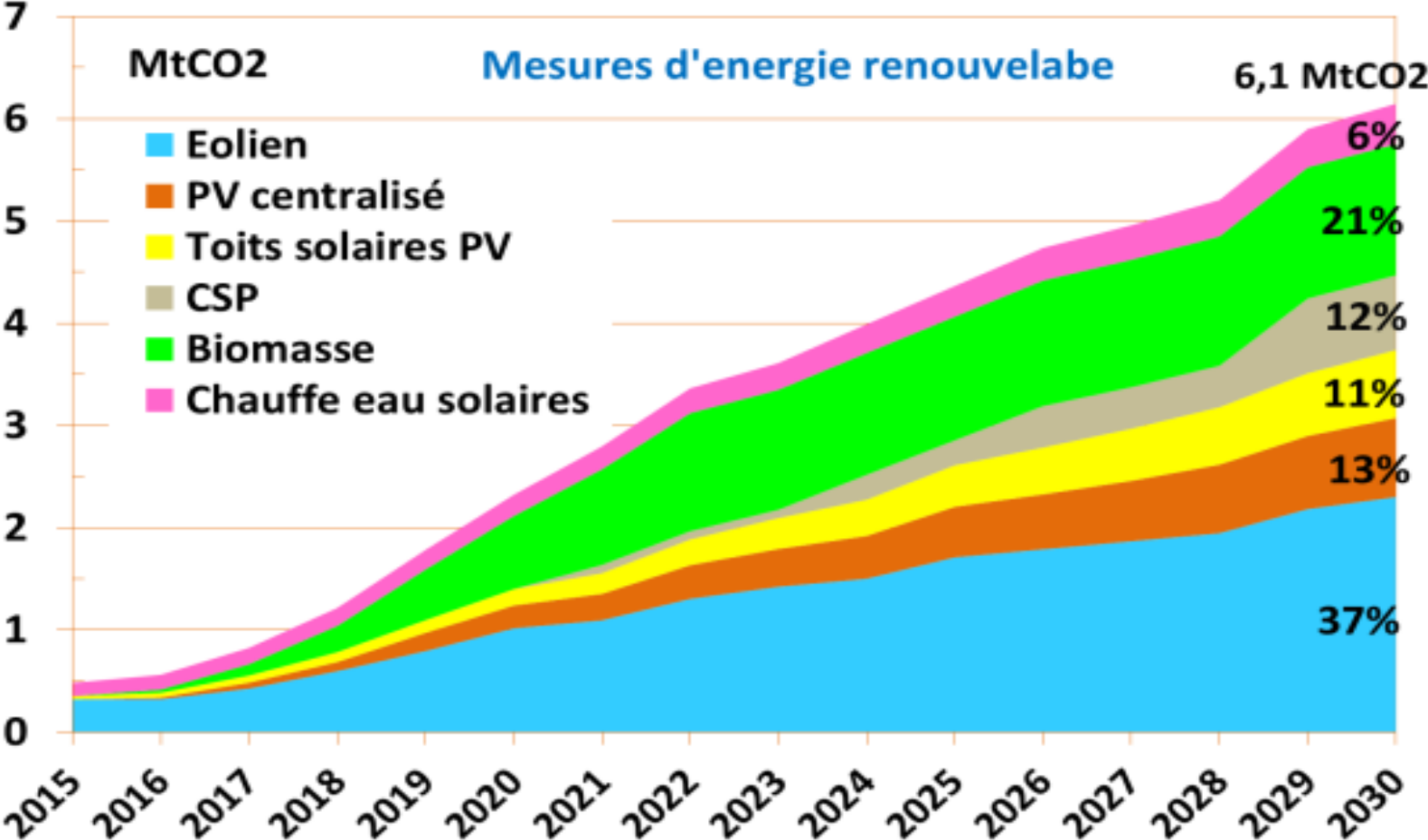
# Aggregated results



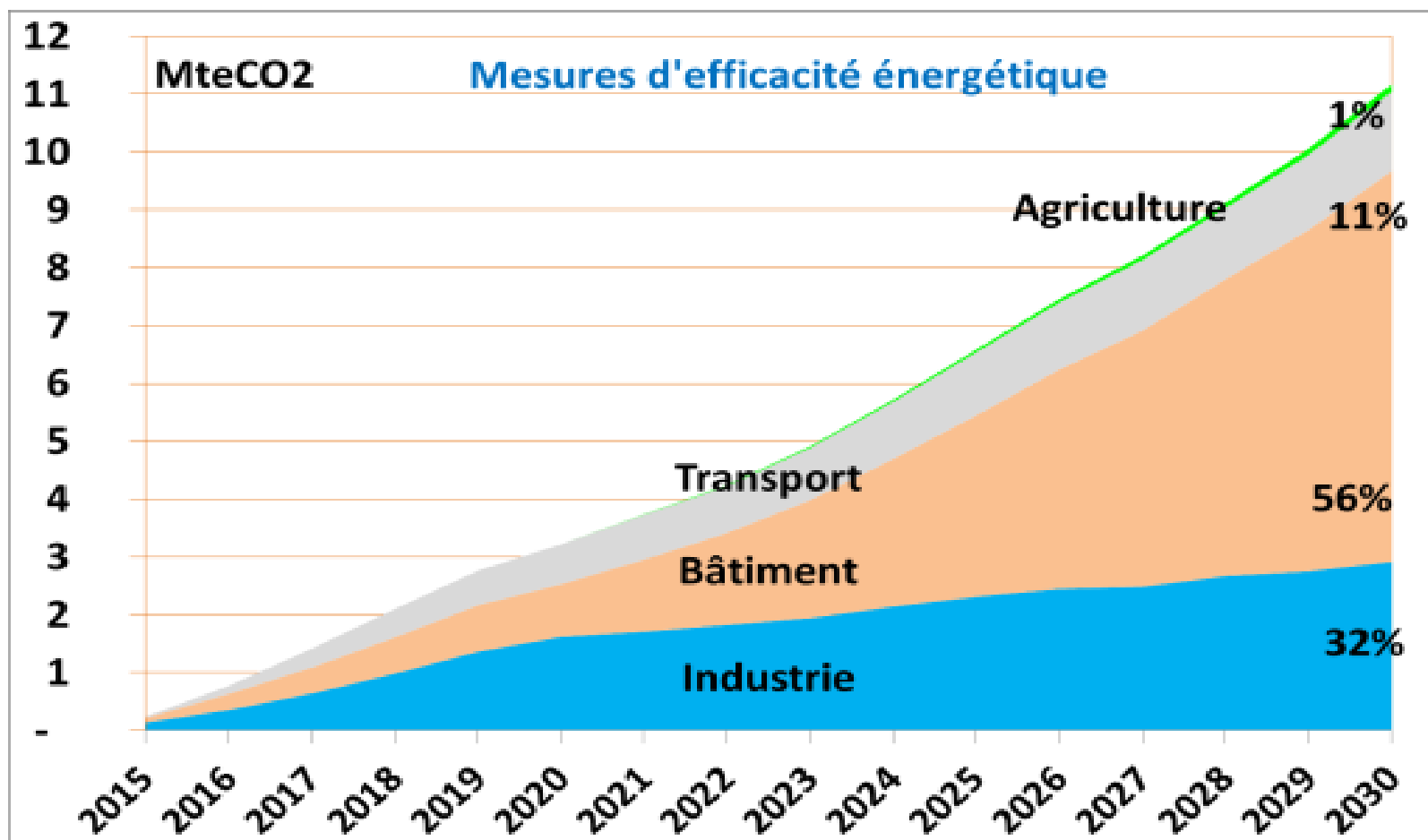
# Decomposition of emissions due to the energy sector in the BAU scenario



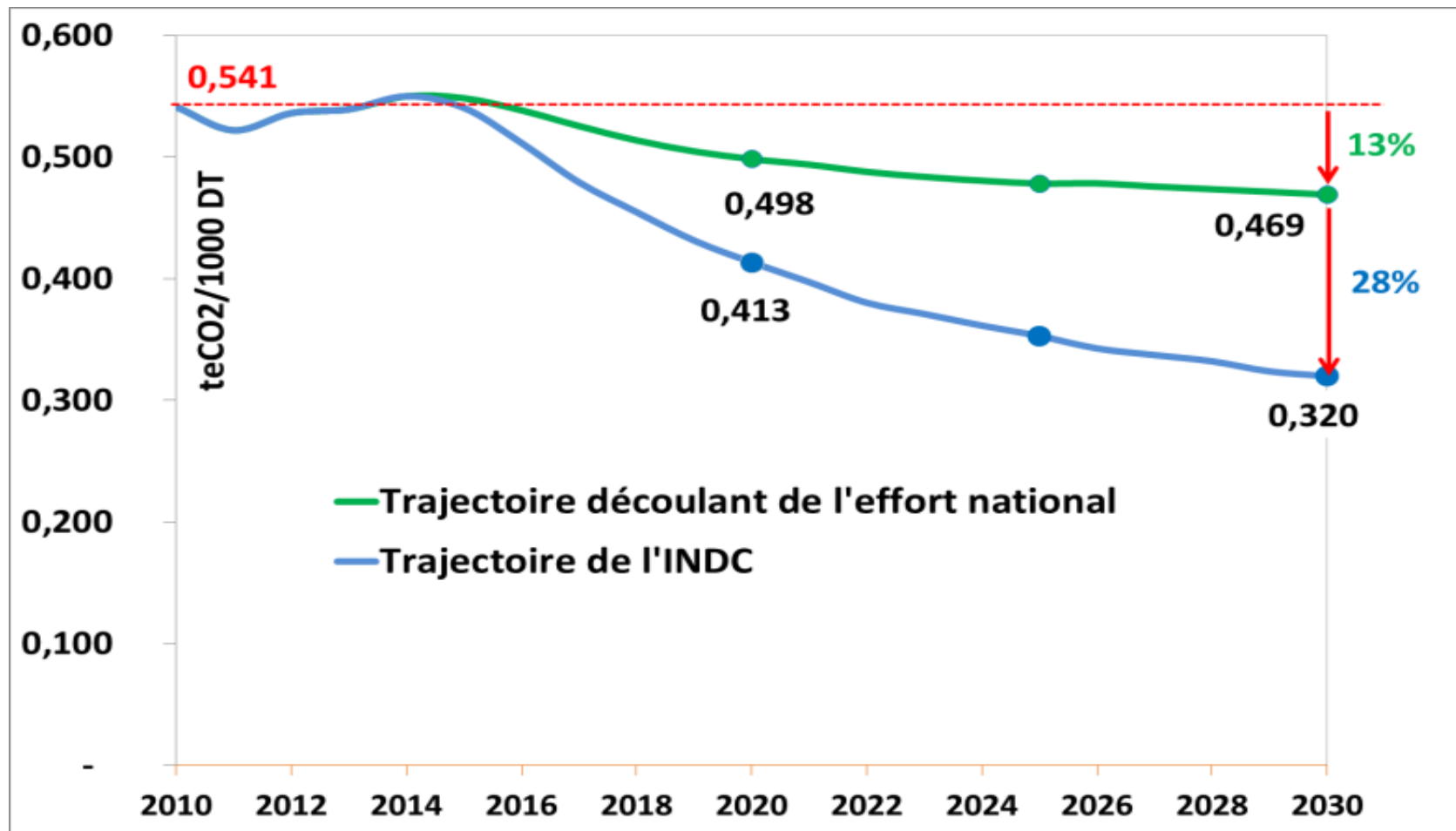
# Reduction GHG emissions from renewable energy



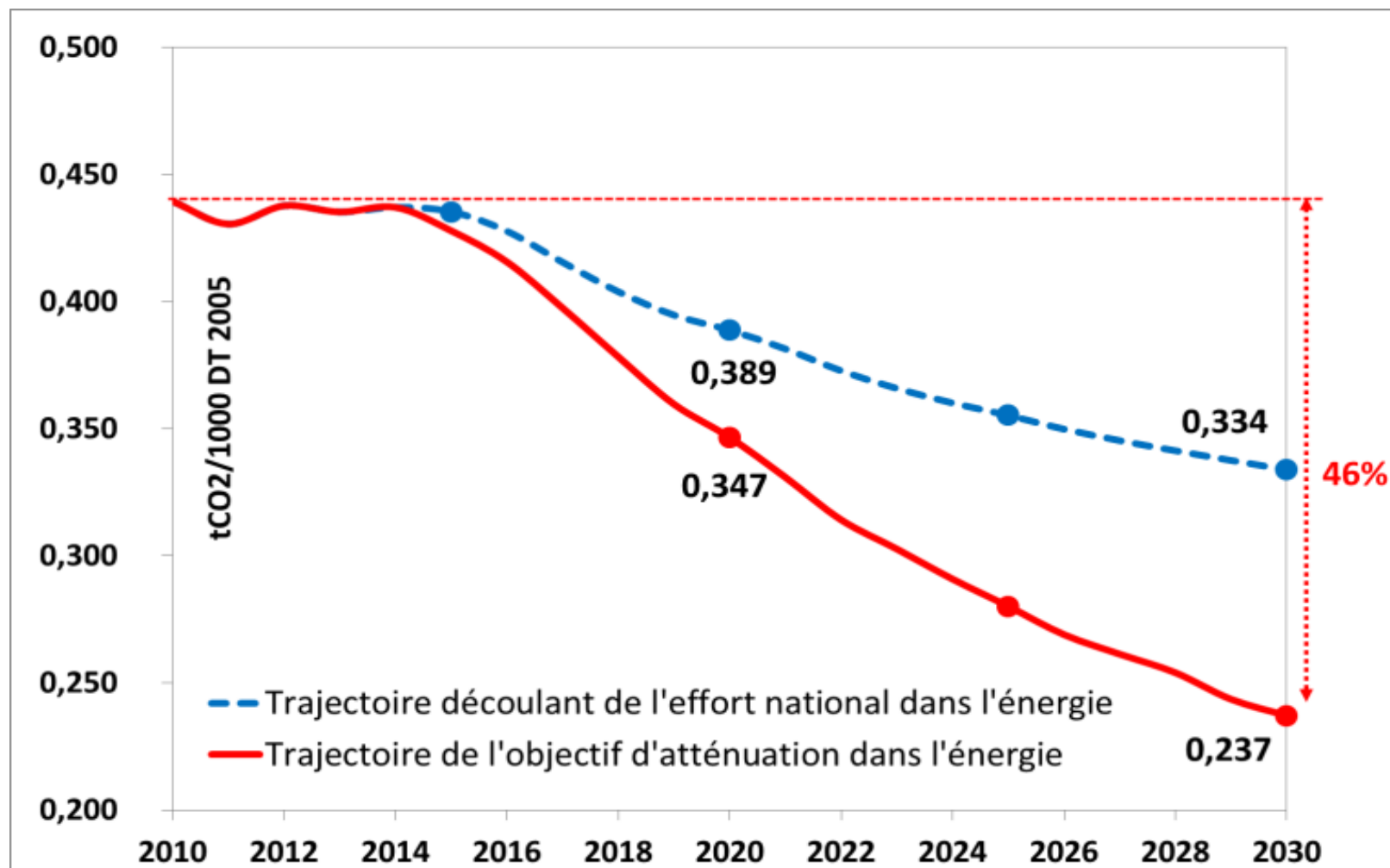
# Reduction of GHG emissions from energy efficiency



# Trajectory of the decrease of the carbon intensity at the national level



# Trajectory of the decrease of the carbon intensity in the energy sector



**Thank you for your attention**