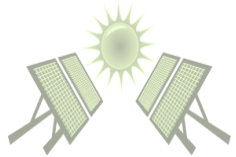




# EU GCC CLEAN ENERGY TECHNOLOGY NETWORK

Join us: [www.eugcc-cleanergy.net](http://www.eugcc-cleanergy.net)

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## Tanzeed Alam

Climate Change Convener, EU-GCC CETN

**Low carbon transition in the GCC region: enabling clean energy technology innovation and deployment through carbon pricing and markets**



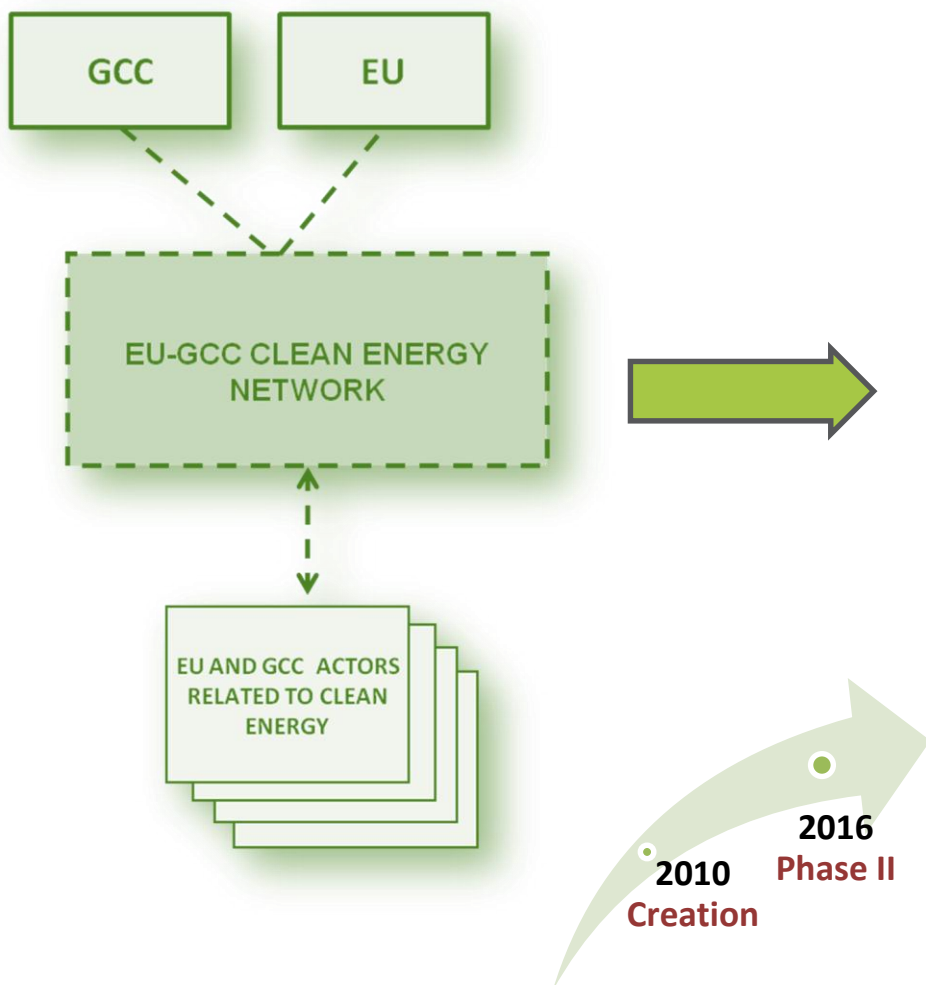
Workshop on 'The synergy of Innovative technologies and Carbon Market developments in achieving Net Zero carbon in the GCC region'

19 January 2021  
Abu Dhabi Sustainability Week

The Network is funded by



# The Network at a glance



- ✓ **The catalyst and coordinator** for cooperation on clean energy
- ✓ **The practical instrument** for cooperation activities in the area of clean energy. Working areas include:
  1. Renewable Energy Technologies
  2. Energy Efficiency and DSM
  3. Clean Gas, Hydrogen
  4. Carbon Capture, Storage and Usage
  5. Electricity interconnections - Electricity Market Integration, and
  6. **Climate Change** (*cross cutting*)

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## 1. Introduction

- Net zero carbon
- The potential for carbon pricing and markets
- The EU Green Deal

## 2. Current Situation in GCC

- GCC context
- Emerging business action

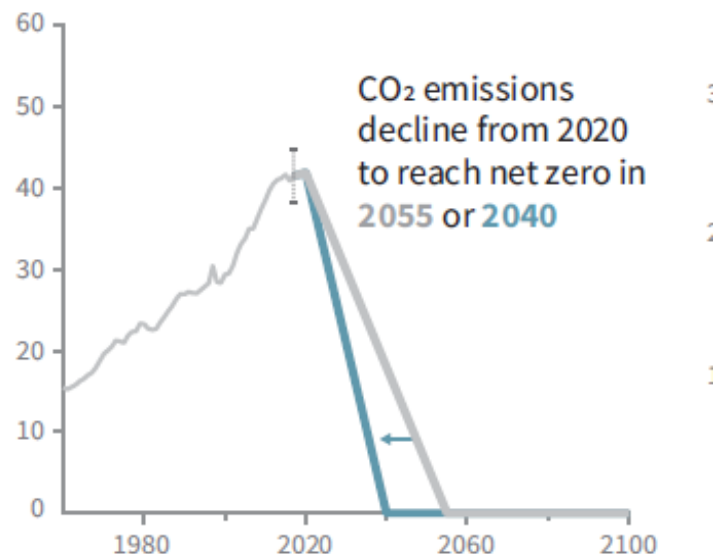
## 3. Opportunities

- Green recovery & economic resilience
- Carbon price for the GCC
- Technology & policy

## Net Zero Carbon

Net Zero means driving emissions down as far as possible AND using carbon sinks and other technologies to remove and store the remaining CO<sub>2</sub>

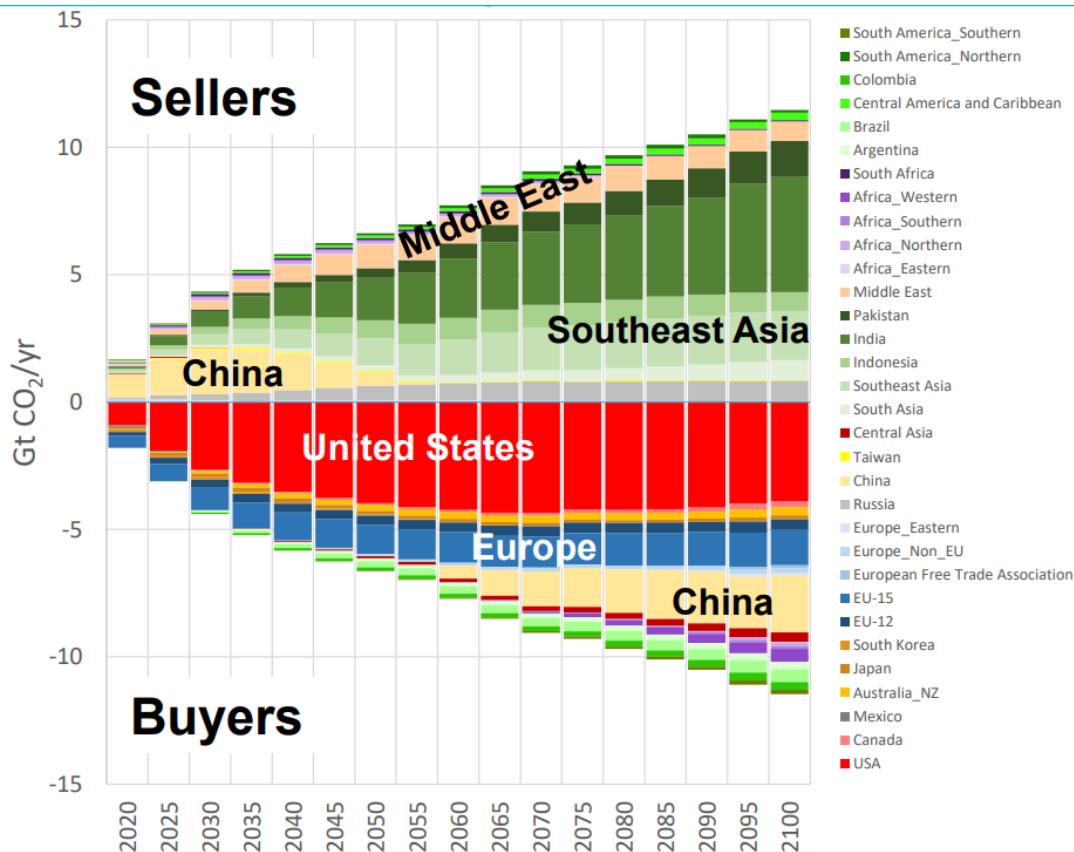
b) Stylized net global CO<sub>2</sub> emission pathways  
Billion tonnes CO<sub>2</sub> per year (GtCO<sub>2</sub>/yr)



To achieve this balance, we need to massively scale up nature-based solutions and deploy new technologies and activities to capture, store or use CO<sub>2</sub>

## The potential for carbon pricing and markets

High Level Commission on Carbon Prices: “carbon price needs to be \$50-100/tonne by 2030 to be compatible with 2°C goal of Paris Agreement, with supporting environmental policies”.



Article 6 of the Paris Agreement is being negotiated as a carbon trading framework

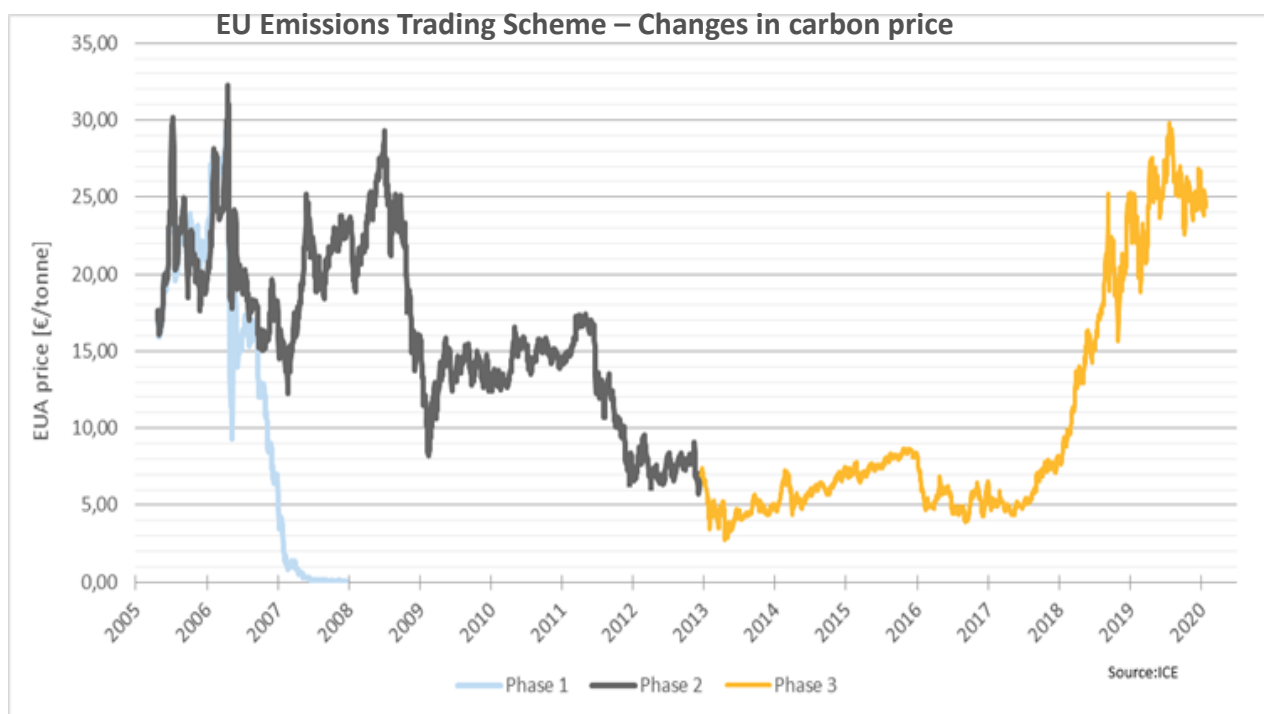
Implementing Article 6 → Huge market opportunity

Cost reductions of potentially \$250 billion (from fossil fuels) by 2030 & 5GT CO<sub>2</sub>/year savings

Middle-East (inc GCC) can be a seller of credits and tap into this opportunity

## The EU Green Deal and Carbon Pricing

- The EU Green Deal is more than about climate, it is the region's new industrial strategy
- 55% reduction by 2030 and net zero carbon by 2050
- Post-Covid19 Recovery Package: €1800 bn
- Increasing role of sustainable finance



### EU Emissions Trading Scheme

1.9 billion tonnes (2017), covering 40% of EU CO<sub>2</sub>e

Market Volume approx. €150bn in 2018

Emissions reduced by a third in period 2005-2019

Price development under more stringent targets

Competitiveness: reduced free allocation & carbon border adjustment

Innovation fund

Scope – road, aviation, shipping, heating

## GCC Context - Climate Change policies are all linked to economic diversification

NOT EXHAUSTIVE

Country	NDC highlights	CO <sub>2</sub> e/year reductions from registered CDM Projects	Other points related to carbon pricing and markets
Bahrain	No CO <sub>2</sub> reduction targets	None registered	N/A
Kuwait	No CO <sub>2</sub> reduction targets	140,000 tonnes (2 projects)	N/A
Oman	2% below BAU of 2030	1,225,000 tonnes (3 projects)	N/A
Qatar	No CO <sub>2</sub> reduction targets	2,500,000 tonnes (2 projects)	Global Carbon Council established, CORSIA phase 1
Saudi Arabia	130MT CO <sub>2</sub> avoided by 2030 (co-benefits, dynamic baseline)	576,000 tonnes (6 projects)	4 <sup>th</sup> fastest reduction of CO <sub>2</sub> emissions of G20 (2018) Circular carbon economy CORSIA phase 1
UAE	2 <sup>nd</sup> NDC – 23.5% reduction of BAU by 2030	921,000 tonnes (15 projects)	<b>“UAE may consider using voluntary cooperation under Article 6 of the Paris Agreement to partially fulfill these objectives.”</b> CORSIA phase 1.

## 2. Current Situation

### GCC Context – Emerging action from businesses

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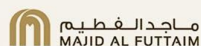


- CDP reporting
- Science Based Target Initiative
- Recipient of \$2bn green loan for CO2 reductions



- Region's first 5-year Green bond in 2017 for \$587 million.
- CDP emissions reporting

37% absolute operational carbon and water footprint reduction target for each Operating Company by 2022



- Greek Sukuk (May 2019), \$600m



- Members are global including EU & UAE, Saudi Arabia, Qatar
- Companies: Masdar, Acwa power, ENGIE



- Founding member of the Oil & Gas Climate Initiative
- \$100m investment in climate friendly projects



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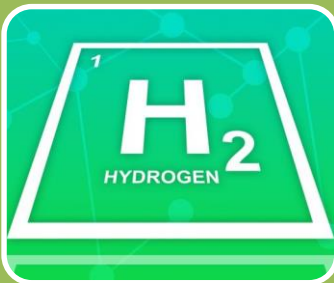
## Carbon Capture Storage and Utilisation

- ADNOC to reduce carbon intensity by 25% by 2030
- Al Reyadah plant storing 800,000 tonnes CO<sub>2</sub>/year aiming to reach 5MT by 2030  
→ **\$250-500m/year by 2030** (at a carbon price of \$50-100/tonne)
- Uthmaniya oil field (Saudi Aramco), 800,000 tonnes CO<sub>2</sub>e per year for Enhanced Oil Recovery



## Renewable Energy

- GCC countries are setting record low prices for Solar PV and CSP with storage
- Achieving current targets would result in 136MT CO<sub>2</sub> savings by 2030  
→ **\$6.8-13.6 billion/year by 2030** (at a carbon price of \$50-100/tonne)
- Distributed generation is also a growing market



## Green Hydrogen

- World's largest plant being built in NEOM (KSA) by 2025, 4GW of solar and wind power, \$5 billion cost, 650 tonnes/day hydrogen, 1.2MT/year of green ammonia, saving >3MT CO<sub>2</sub> annually  
→ **\$150-300m/year by 2030** (at a carbon price of \$50-100/tonne)
- ADNOC, Mubadala and ADQ formed a hydrogen alliance on low carbon green and blue hydrogen

## The potential for a carbon price and synergistic action

1. COVID-19 has created global momentum for a green recovery with many countries and regions taking action  
→ **an opportunity for GCC countries to realign policies and actions for green growth, innovation, job creation and climate action.**
2. This momentum will place pressure on GCC countries to follow suit  
→ **an opportunity for GCC countries to collaborate with EU and other regions.**
3. A holistic policy framework and business interest is emerging in the GCC: NDCs with carbon reduction targets, renewables and energy efficiency, clean desalination, clean fuels & mobility, fuel subsidy reform, sustainable finance, largescale sub-national projects  
→ **an opportunity for GCC countries to set an economy emissions reduction cap and show intent to utilise Article 6**
4. There is a multi billion-dollar untapped market opportunity for the GCC to benefit from a price on carbon  
→ **an opportunity to create a carbon market**
5. Revenues from a carbon price can be used to finance innovation, take more risks and scale up clean energy technology projects in the GCC  
→ **an opportunity to achieve national development goals, create resilient knowledge-based economies and become a global clean energy hub**

*“Choose to be optimistic, it feels better.” Dalai Lama*



## Synergy with other ongoing initiatives in the EU and the GCC



- **Open/free membership (inclusive membership policy)**
  - Experts Network
  - Institutions Network

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