



Energy Community Methane Mondays - Methane emissions detection, measurement and quantification technologies

October 11th, 2021

OUR MEMBER COMPANIES

BR DXY **E**xonMobil oromco CNPC equinor PETROBRAS REPJO Occidental



THE INITIATIVE : LOWER CARBON VIA COLLECTIVE ACTION & PARTNERSHIPS



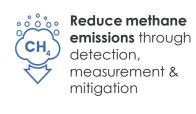
- Voluntary
- **Ambitious** •
- Additional •
- Action oriented ٠





CLIMATE INVESTMENTS : LOWER CARBON VIA INVESTING IN SOLUTIONS

- Invest •
- Implement ٠
- Achieve impact at a global scale





Reduce carbon dioxide emissions. by increasing energy efficiency in power, industry and transport

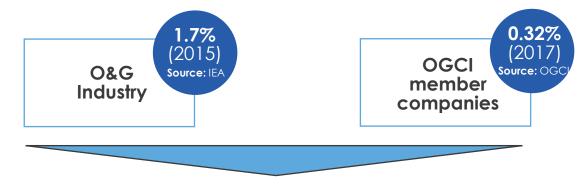


Recycle and store carbon dioxide applications such as industrial processes and power generation

CLIMATE



Methane Intensity from the Oil & Gas Industry...



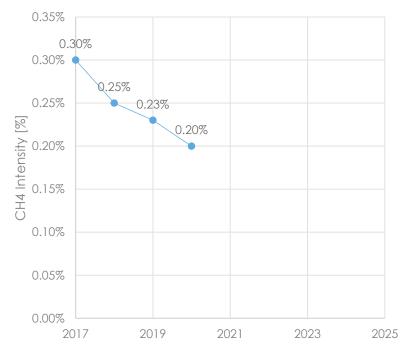
... highlights two challenges that OGCI & the rest of the O&G industry need to rapidly overcome



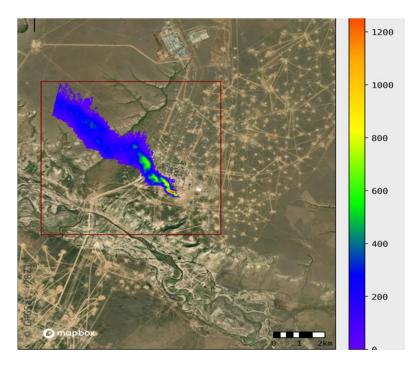
Sources: IEA Methane Tracker (2020), IEA WEO (2019), OGCI Annual Report (2019)



OGCI Upstream Methane Intensity Target



Deploying satellite campaigns to mitigate methane emissions in developing countries



#2 Increase transparency & data accuracy



Global Gas Flaring Reduction Programme with World Bank and Colorado School of Mines



Analysis of global natural gas supply chains with Imperial College London

GHG emissions [gCO2e/MJ] CH4 emissions [gCO2e/MJ] % of produced CH4 used and emitted

Origin	Upstream	Transport	Regasification	Market
	11.44	1.57	0.93	Asia (Japan)
Australia	4.03	0.01	0.03	
Australia	4.78 %	1.68 %	1.19 %	
	12.48	1.55	0.34	
SE Asia	0.17	0.004	0.006	
	8.80 %	1.79 %	0.61 %	
North America	26.87	4.66	1.52	
	13.94	0.04	0.05	
	22.38 %	4.12%	0.16%	
Middle East	9.22	2.15	0.35	
	0.085	0.004	0.006	
	13.49 %	2.53 %	0.62 %	
	9.22	1.66	0.35	Europe (UK,
	0.085	0.004	0.006	Germany,
	13.49 %	2.01 %	0.63 %	Spain, Greece,
	3.08	3.78		Tirkey, Italy)
Russia	0.82	0.33	N/A	
	4.73 %	8.01 %		
North Sea	3.46	0.02		
	0.10	0.01	N/A	
	4.68 %	0.02 %		
	5.00	1.67	0.06	
	0.11	0.03	0.00	
	9.64 %	1.58 %	0.00 %	

Sources: GGFR (2021), ICL (Minerals, Energy and Environmental Engineering Research Group, Analysis of global natural gas supply chains, 2019)



OGCI welcomes dialogue and engagements with O&G operators outside OGCI membership, to jointly collaborate to reduce direct emissions from the O&G industry.

Practical efforts include:

- 1. Sharing of best practices and material to reduce GHG Scope 1 & 2 emissions.
- 2. Support to improve quantification and reporting of CH4 emissions.
- 3. Testing, demonstrating and deploying emerging detection and measurement CH4 technologies.
- 4. Joint engagement with policymakers to support the implementation of direct and / or indirect regulation tackling specifically methane emissions reduction.