

# ISLAMIC REPUBLIC OF MAURITANIA

## Electricity Sector, a rapidly changing sector...

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## ■ Strategy :

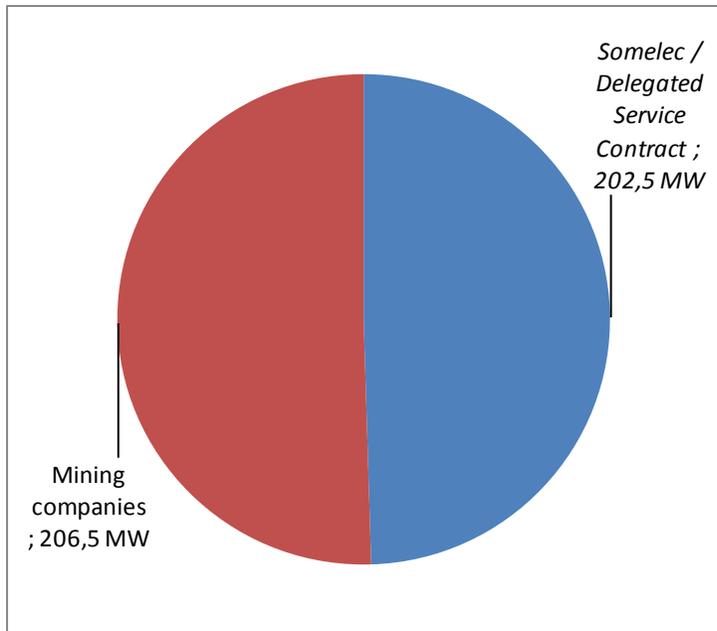
- Add production capacity from local resource (mainly gas and hydroelectricity);
- Develop grid and interconnection with neighboring countries ;
- Enhance part of renewable energies in the energy mix.

## ■ Opportunities :

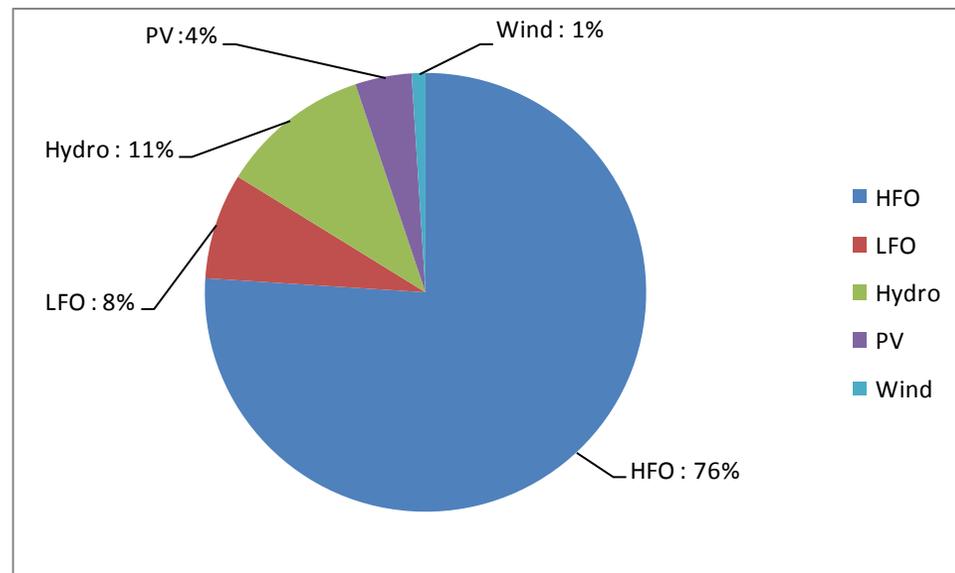
- Increasing contribution of extractive industries in national GDP
  - Development of oil exploration. Discoveries offshore natural gas.
  - Development or expansion of new mining projects (Kinross-Tasiast / Snim / Glencore, etc.).
- Nouadhibou Free Zone



■ Installed Capacity



Mining versus Somelec



Technology breakdown



## ■ 2013 census / Data electricity :

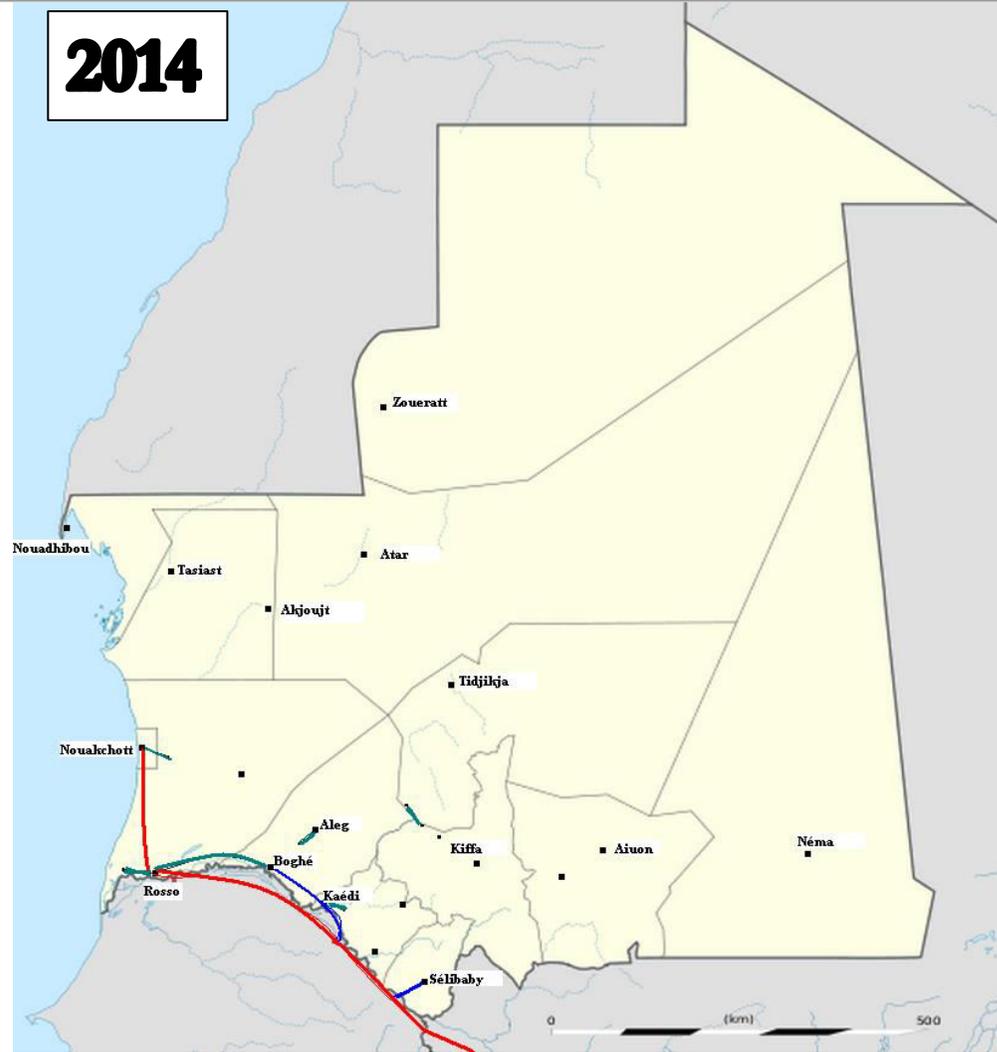
- 72 cities with electricity in 2014 versus 41 in 2008
- Nouakchott (27% of the population) and Nouadhibou (2<sup>nd</sup> city) : 100% access.
- 6 out of 47 cities with more than 5.000 inhabitants with out electricity
- 27 out of 48 cities with population between 2.500 and 5.000 with out electricity
- About 2.000 cities with population between 2.500 and 5.000 and 6.000 with less than 1.000 inhabitants

## ■ Main Challenge:

- Provide an affordable electricity to all citizens despite geographical constraints
- Provide industrial sector with a secure and reasonably priced to boost the economy



2014



**REGULATION ACT (2001)**

Regulating the activities of electricity, water, telecommunications, and postal

**REGULATION AUTHORITY**

- Approves the bids, conduct launch, evaluates tenders and awards licenses and permits,
- Develop the specifications of public service delegation;
- Estimates the amount of compensation for public service delegation;

**Ministry in charge of Electricity**

Develops, implements, monitors the implementation of policies, strategies and programs of the State in Electricity Sector.

**ELECTRICITY CODE (2001)**

Activities of generation, transmission, distribution and resale of electricity, liberalized and subject to licensing under the control of the regulatory authority (2001).

**SOMELEC CONTRACT PROGRAM**

Intervene urban area

**APAUS**

Promotes universal access to regulated services  
Intervene rural area

- Building networks;
- Thermal power plants;
- Maintenance power plants

**ADER**

Promotes rural electrification  
Intervene rural area

- Solar kits;
- thermal power plants
- Hybridization of plants;
- power plants Maintenance

**PRODUCTEURS INDÉPENDANTS**

**SNIM**

Self Producer  
-Distributor :Zoueratt

**MCM**

Self Producer

**TAZIAST**

Self Producer

-Ensures the generation, transmission, distribution, purchase and sale of electricity in urban areas.

-Currently manages 44 centers.

-Administered prices.

-180,000 customers.

-Balancing subsidy in 2013: 6.000.000.000 UM

6,000 customers / 20 centers / Tariffs:  
(1) 51 UM / kWh (2) 81 UM / kWh (3) 91 UM / kWh



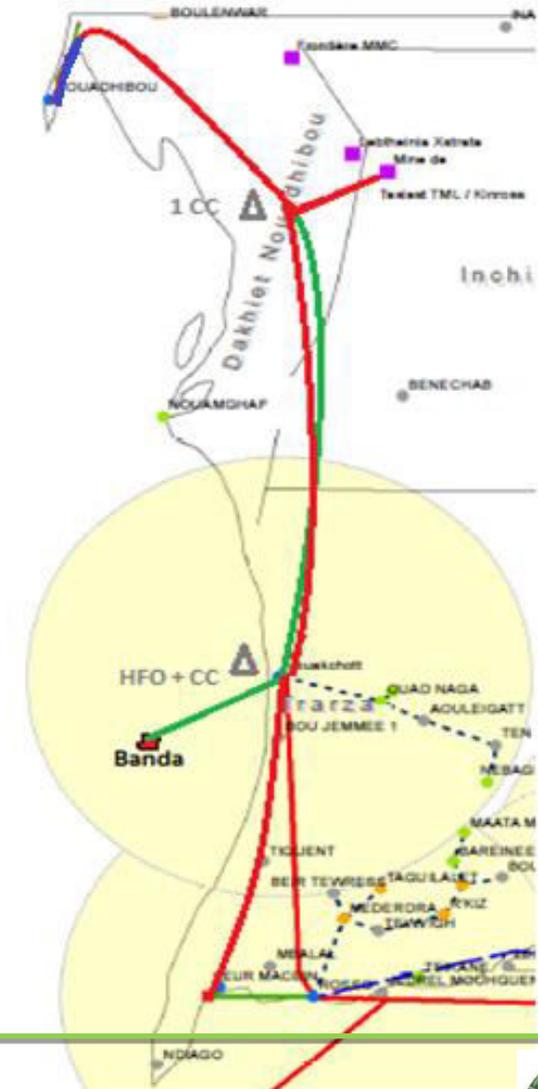
■ Forecast Supply Demand Balance (in MW):

Année	Interconnecté - Sc. moyen	Interc. + Mines - Sc. moyen	Interconnecté - Sc. Haut	Interc. + Mines - Sc. Haut	Interconnecté - Sc. Bas	Interc. + Mines - Sc. Bas
2015	129	461	143	475	102	229
2016	144	476	161	494	110	432
2017	156	569	174	588	136	468
2018	170	784	188	802	149	482
2019	184	798	203	818	160	573
2020	196	811	220	835	172	786
2021	208	1 319	237	1 347	183	798
2022	222	1 333	255	1 366	192	808
2023	236	1 347	275	1 385	202	818
2024	251	1 362	295	1 406	212	828
2025	267	1 377	318	1 429	223	838



## ■ Transmission lines :

- HV 225kV line, North plant OMVS substation, Procurement ongoing, Funded by AFESD
- HV 225kV line, Nouakchott - Nouadhibou, Procurement ongoing, Funded by SDF
- HV 225kV line, Nouakchott – river Senegal, Procurement ongoing, Funded by AFD
- HV 90 kV and MV 33kV inter connexion with OMVS grid, feasibility study



■ Dhar Hybrid Solar/Diesel Power Plant :

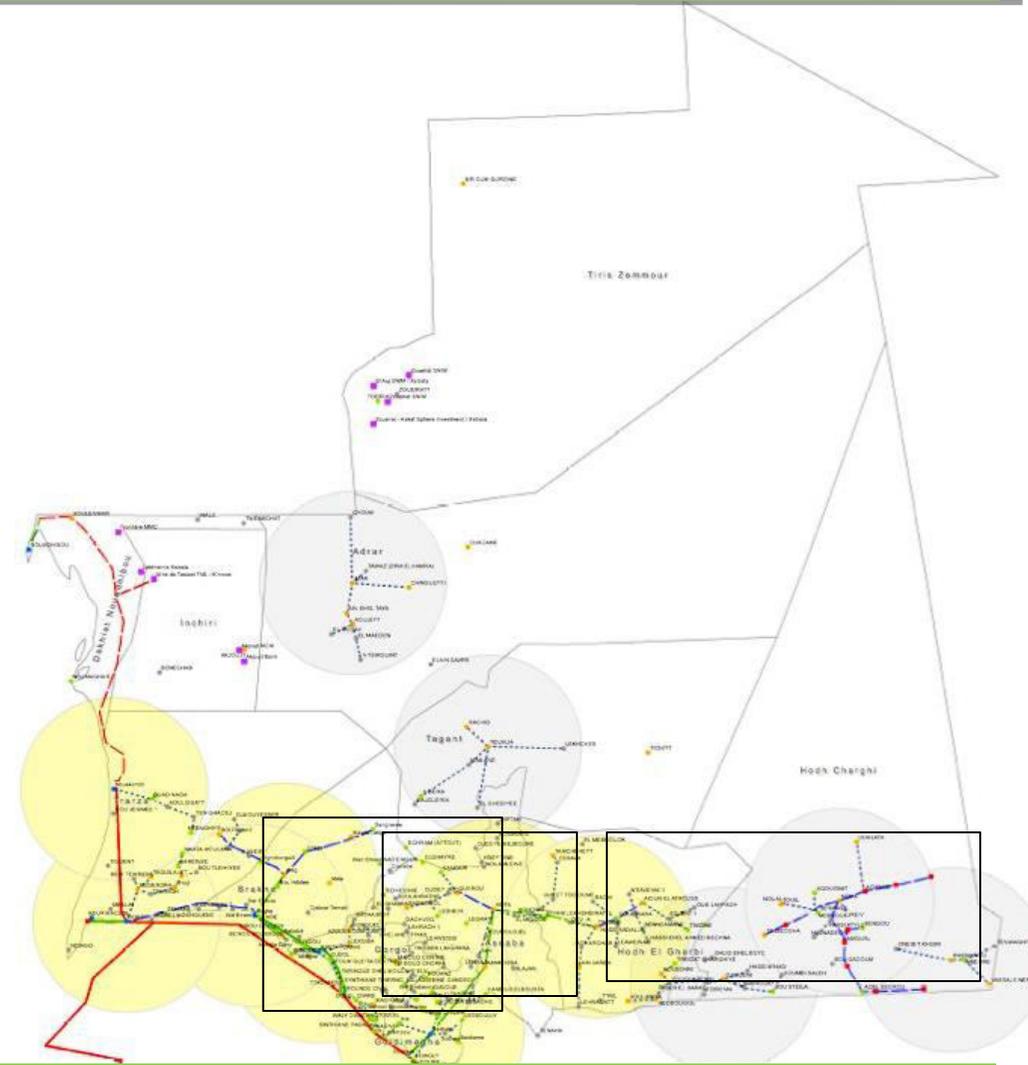
- ✓ 2 plants : 2+1 MW Solar Plant, 4+2 MW Diesel (Nema & Adel Bagrou) and more than 500 km lines
- ✓ 49 € Million, Funding requested

■ Aftout Echergui Solar Power Plant :

- ✓ 2,2 MW PV Plant, 0,5 MW Diesel and 270 Km 33kV lines, 60 km distribution, \$30 Million, Financed by OFID and IsDB

■ Kiffa Solar Power Plant :

- ✓ 1,4 MW PV Plant, 4 MW Diesel and 65 km 33kV lines, 23M € Million, Financed by AFD



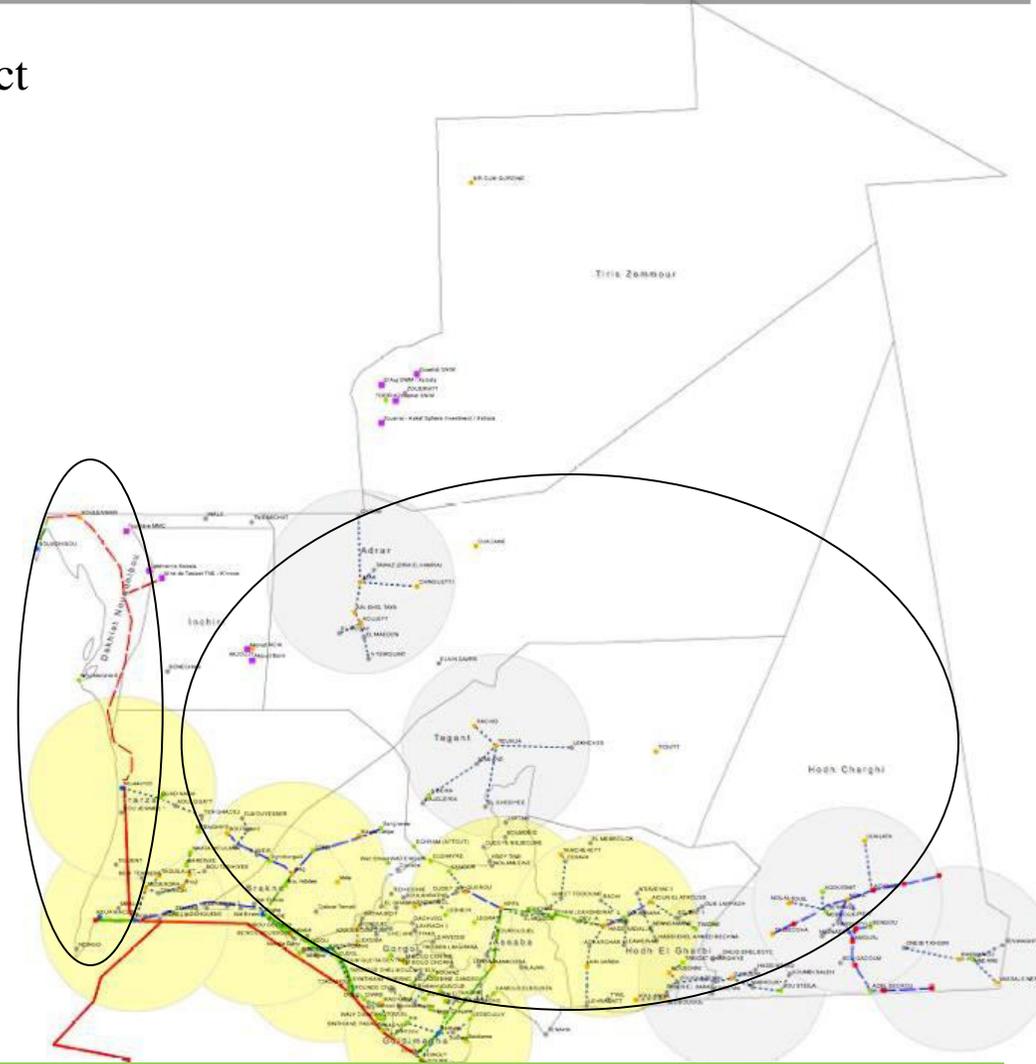
## ■ Portfolio of Renewable Energies Project for small communities

### ■ Coastal communities: wind Energy

- >200 KW Wind plants

### ■ Hinterland communities : Solar Energy :

- > 100 KW PV plants
- PV units <5 KW (very small communities)



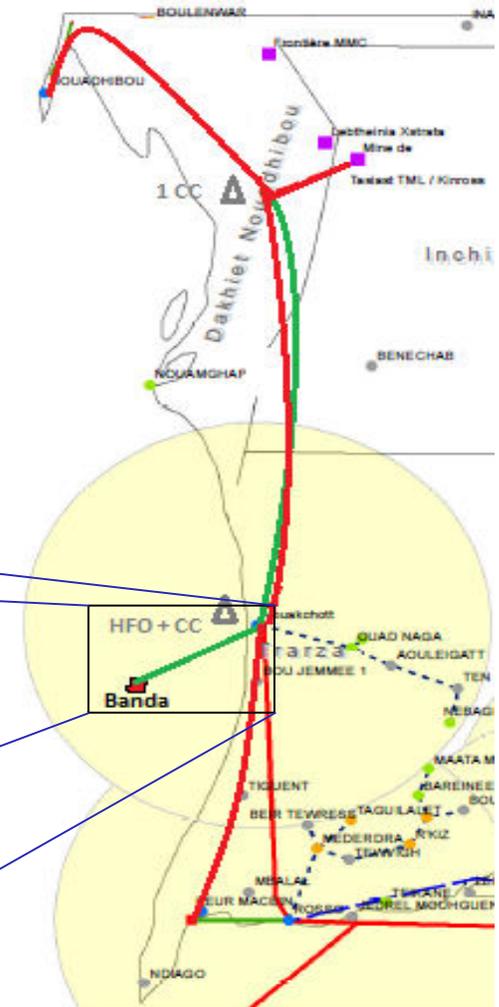
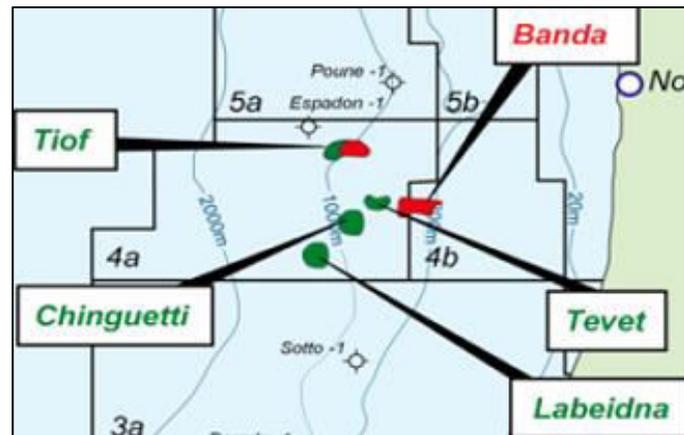
## Gas to Power Project

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## ■ Gas fired Power Plant :

- Offshore BANDA Field with 1,1 TCF of proved natural gas reserve.
- Operator Tullow Oil Plc can secure gas supply of 65 mmscfd for 20 years.
- New Company created in 2012 : SPEG (with SOMELEC and SNIM as shareholders)



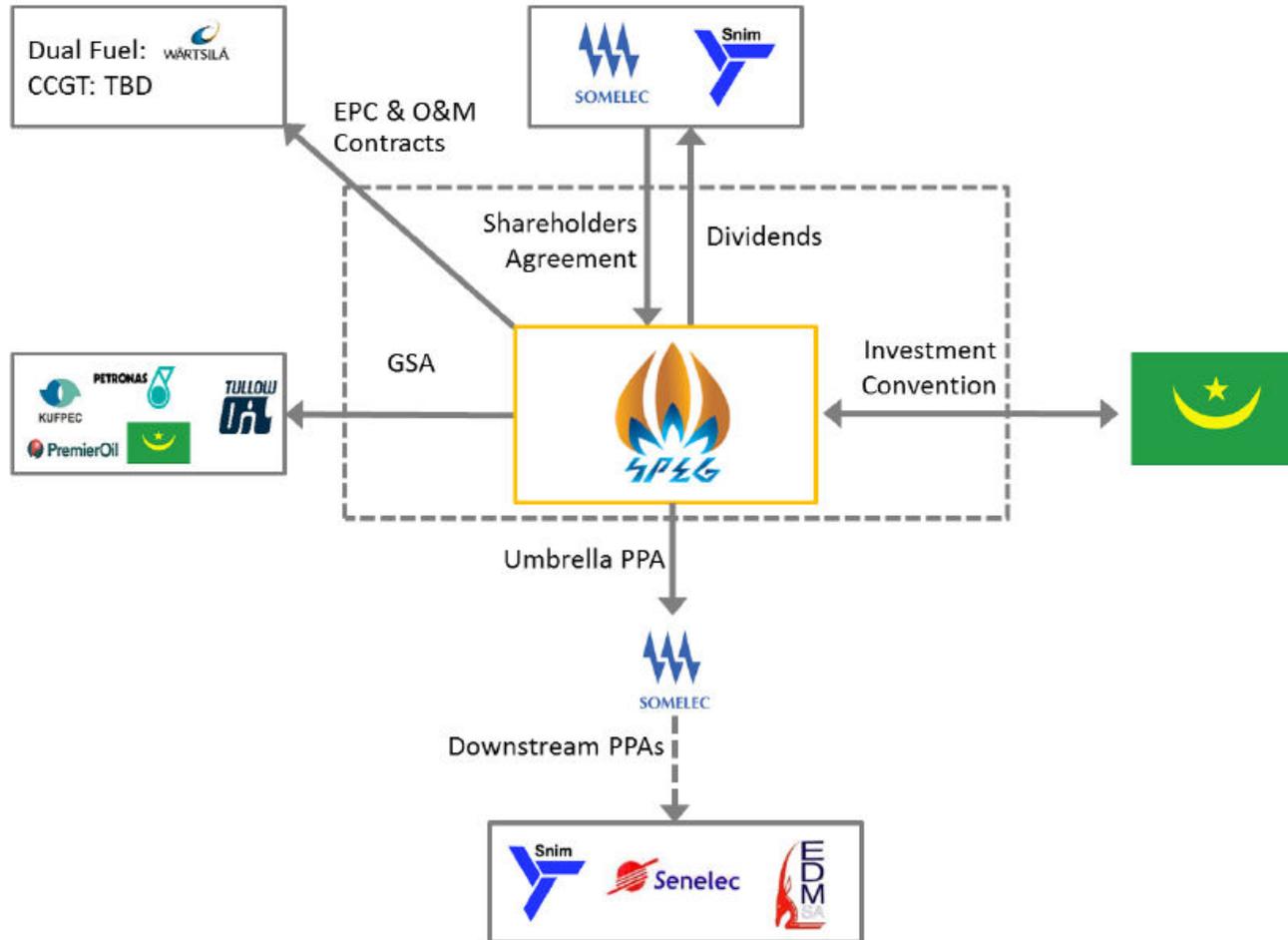
## ■ Why develop off the shore field for electricity purpose?

- Discoveries not sufficient to develop an LNG project;
- Provide domestic and mining demand with a clean, secure and affordable energy;
- Reduce the energy bill and dependency on oil prices fluctuation;
- End subsidies.

## ■ Why export part of the production ?

- Project based on a GSA contract (20 years Take or Pay) with Tullow Oil as the Operator:
  - \$650 million upstream investment
  - Minimum 42 mmscfd consumption
  - Minimum of 300 MW Gas powered plants to be installed by SPEG
- Tighten ties with neighboring countries who face critical situation
- Contracts guaranteed by World Bank (PRG & MIGA)

■ Project structure



■ **Downstream infrastructure timetable**

horizon 2017	Dual 120MW Plant	Oct. 2014
	Additional Dual 60MW	Aug. 2015
	CCGT 130MW NKC	4th trimester 2016
	HV 225kV line / North plant - OMVS substation	4th trimester 2015
	HT 225kV line NKC-NDB	4th trimester 2016
	HT 225kV line NKC-Tobène	1st semester 2017

## ■ Next Steps :

- Signature of the GSA between Tullow and SPEG
- Signature of the PPAs :
  - SPEG – SOMELEC
  - SOMELEC – SENELEC (Senegal)
  - SOMELEC – EDM (Mali)
  - SOMELEC – SNIM
- Building the infrastructure...

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**THANK YOU**