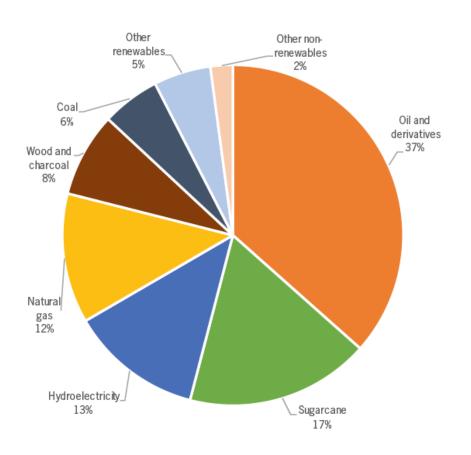






Energy matrix







Key factors

- 10th largest oil producer in the world (largest in LA)
- 7th largest consumer of oil products
- The sector answers for 11% of the industrial GDP
- Improved legal framework
- Wide range of well-funded international oil majors and EPCIs
- Pre-salt exploration in 2017: 1.3 billion barrels/day of a total of 2.16 billion barrels/day





Potential investments

Stationary Production Units – SPU Estimated Demand







Lifespan - oil well

STAGES

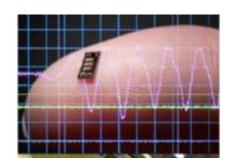






Opportunities for Dutch players

HTSM



- Responsible Business Conduct (CSR)
- Innovation
- Sustainability











1. Exploration and subsea

- Engineering
- Seismic survey and analysis
- Deep sea equipment (ROVs, pipes & cables laying)
- IT communication equipment
- Drilling





2. Operations, maintenance & repair

- Offloading
- Logistic efficiency
- Safety
- Ship repair
- Services execution





3. New build & installation

- Know-how and experience with HTSM
- Updated technology for shipyards
- Design
- Transfer of technology
- Accommodation facilities offshore





4. Decommissioning (?)

- Delicate discussion in Brazil
 - other priorities
 - costs not foreseen in planning 15/20 years ago
- Recuperation factor important for the national regulatory agency (ANP)
- Opportunities for small operators wells with full infrastructure





Training, human resources

- Technical university Brazilian Petroleum Institute (IBP)
- Partnerships for lectures and specialized courses
- Need for specialists
- Human Resources companies











