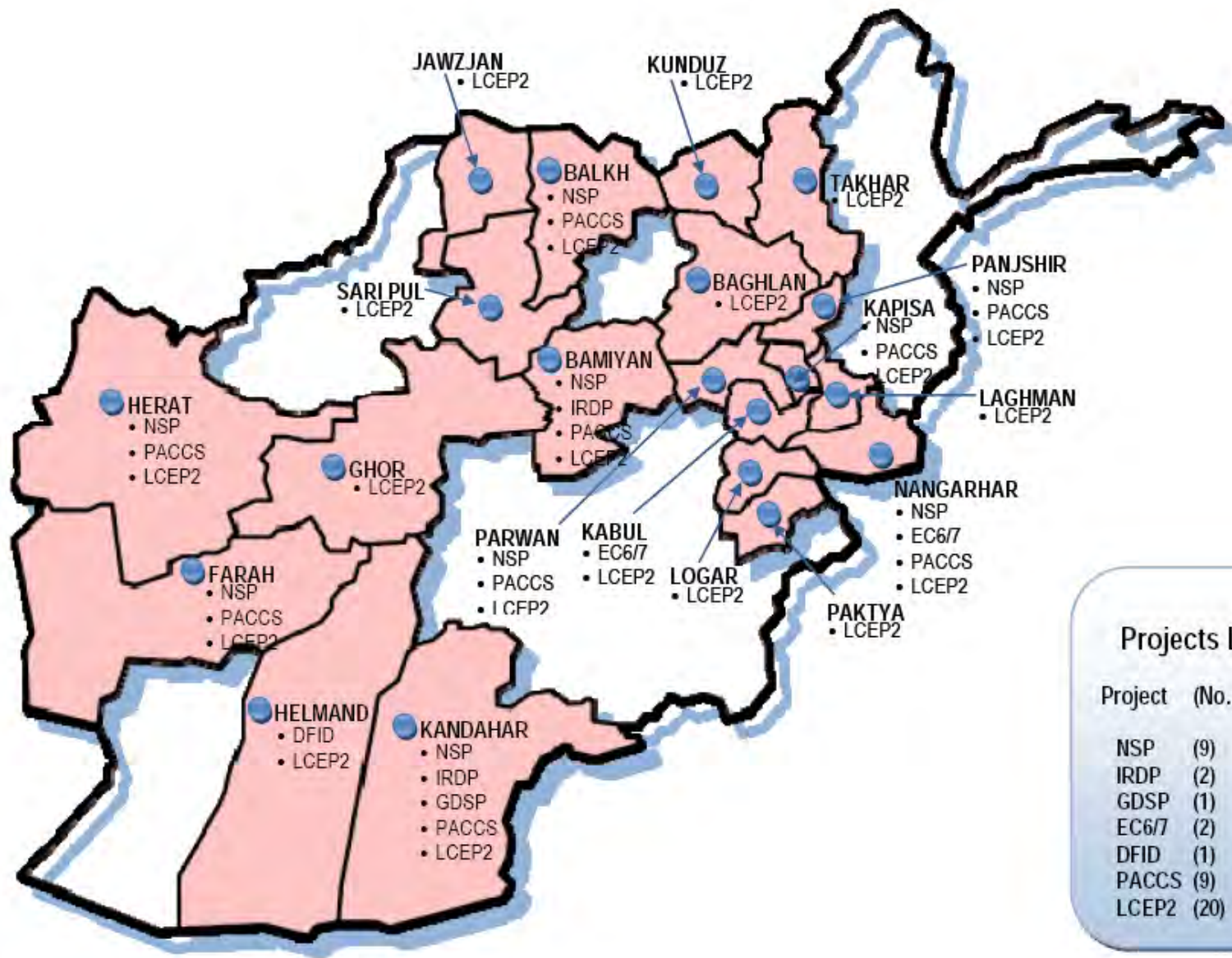


UN-HABITAT AFGHANISTAN
Energy Sector



UN-HABITAT active in 20 of the 24 provinces



Projects Locations

| Project | (No. of Provinces) |
|---------|--------------------|
| NSP | (9) |
| IRDP | (2) |
| GDSP | (1) |
| EC6/7 | (2) |
| DFID | (1) |
| PACCS | (9) |
| LCEP2 | (20) |

Energy and Minerals:

Majority sources of fuel and natural gas located in northern part of Afghanistan.

In rural area of Afghanistan people use wood, animal dung and residual of crops as energy source. Therefore cutting of trees and plants is a big threat for living environment.

Energy sources in Afghanistan

| No. | Energy source | Potential capacity | Current Production |
|-----|---------------|--------------------------------|--------------------|
| 1 | Fuel | 15 million tones | 400 barrel/day |
| 2 | Natural Gas | 300 to 400 million cubic meter | |
| 3 | Coal | 400 million tone | 100000/year |
| 4 | Hydro Power | 23000 mega watt | 250 Mega watt |

Table 7.1. Electricity supply sources and operating capacity

| Year | Hydro (MW) | Thermal (MW) | Imported (MW) | Other: diesel, micro hydro & renewable (MW) | Total supply (MW) |
|-------------|---------------|-----------------|------------------|--|----------------------|
| 1357 (1978) | 259 | 137 | 0 | 0 | 396 |
| 1381 (2002) | 141 | 16 | 87 | 0 | 243 |
| 1386 (2007) | 262 | 90 | 167 | 133 | 652 |

| Source of water | Capacity MM³ | consumption MM³ | Balance MM³ |
|---------------------------|------------------------------------|---------------------------------------|-----------------------------------|
| Surface water | 57000 | 17000 | 40000 |
| Under ground water | 18000 | 3000 | 15000 |
| total | 75000 | 20000 | 55000 |

Million Cubic meter (MM³)



- 5-Afghanistan has good potential for solar energy because radiation 6.5 Kwh per square meter and around 300 sunny days in a year

6-Wind is another source of energy in Afghanistan. In Herat province there is continuous wind for 120 days and it been used a source for energy;

7-Bio-gas is another alternative could be use in agricultural area;

8-Geo-thermal source of energy in the mountains could be used;

At the present 70 to 75% of the resource for energy are met by traditional energy source such as animal dung, fuel, wood and residual of crops;

Annual biomass energy use in Afghanistan is 2.5 million of oils and the remaining requirements met by commercial energy.



Micro-hydro, solar, waste and even small diesel power and energy generating sources will be promoted to improve increased rural access to power.

Commercial operation of these services will be encouraged and technical standards will be established to ensure cost recovery, sustainability and safety.

National Strategy Vision and Goal

An energy sector that provides drivers of growth in the economy with long term reliable, affordable energy based on market based private sector investment and public sector oversight.

Challenges:

- 1- due to long war afghans were not able to develop their country.
- 2- increase of population.
- 3- for enough energy and extracting of minerals huge investment is required.
- 4- land mines and unexploded ordonates are not cleared yet.
- 5- lack of rule of law.
- 6- lack of security.
- 7- lack of improved technology and qualified professionals.