



Da Afghanistan Breshna Sherkat



# Investment Opportunities

In Energy Sector



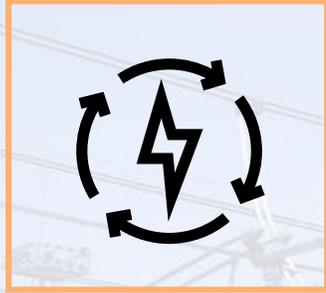
*January, 2025*

## Who We are?

Da Afghanistan Breshna Sherkat (DABS) is the state entity responsible for the Generation, Import, Transmission, Distribution, and Revenue collection of the electricity in Afghanistan. DABS operates under the General Directorate of Emirate-Owned Companies, overseeing Energy Infrastructure Development and Investment Attraction.



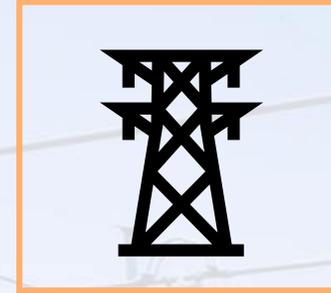
# What We Do?



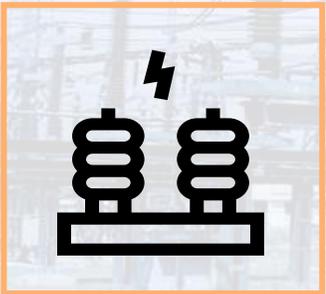
**Generation**



**Import**



**Transmission**



**Distribution & Revenue  
Collection**



**Energy Infrastructure  
Development**



**Investment Attraction**

# OUR STORY

1348/1969

## Establishment

Following a Royal Decree as  
“Da Afghanistan Breshna  
Moasesa”

1

1365/1986

## Renamed

"Tasadi Breshna" Operated under the  
MEW as a profit-seeking company with  
a fixed capital of 10.686 million AFN.

2

1386/2008

## Restructured

As "DABS" with Initial capital of 25 billion  
AFN & Final Capital of 100 billion AFN in  
accordance with the LLC & Joint Stock Law

3

# OUR STORY

1399/2020

## Recent Amendments

Statute amended, by the Cabinet of the Islamic Republic of Afghanistan. Since, the company operates under the Law on State Companies.

1403/2024

## Current Status

DABS has independent Financial Statements from its shareholders, with the total capital is 84.3 Billion AFN. The only government shareholder is the MoF.

4

5



### Vision

Da Afghanistan Breshna Sherkat addresses the country's electricity needs while leveraging new technologies for sustainable economic and social development. The company aims to enhance electricity access to boost domestic production and create an economically, socially, and environmentally sustainable power supply, ensuring reliable and affordable electricity for all segments of society without discrimination.



▪ Sustainable & Reliable Power Supply

▪ Extension and strengthening of the power network

▪ Attracting private investment and ensuring financial sustainability

▪ Cooperation with international organizations

▪ Increasing access to electricity

▪ Enhancing energy efficiency and promoting renewable energy

▪ Improving customer services and empowering the workforce

▪ Supporting the local community & promoting transparency & social responsibility

▪ Transit and supply of electricity from neighboring countries

## Our Objective

▪ Increase the reliability and sustainability of the power system

▪ Reduce energy losses

▪ Improve access to electricity and quality of electricity services

▪ Enhance the financial capacity and financial management of the company

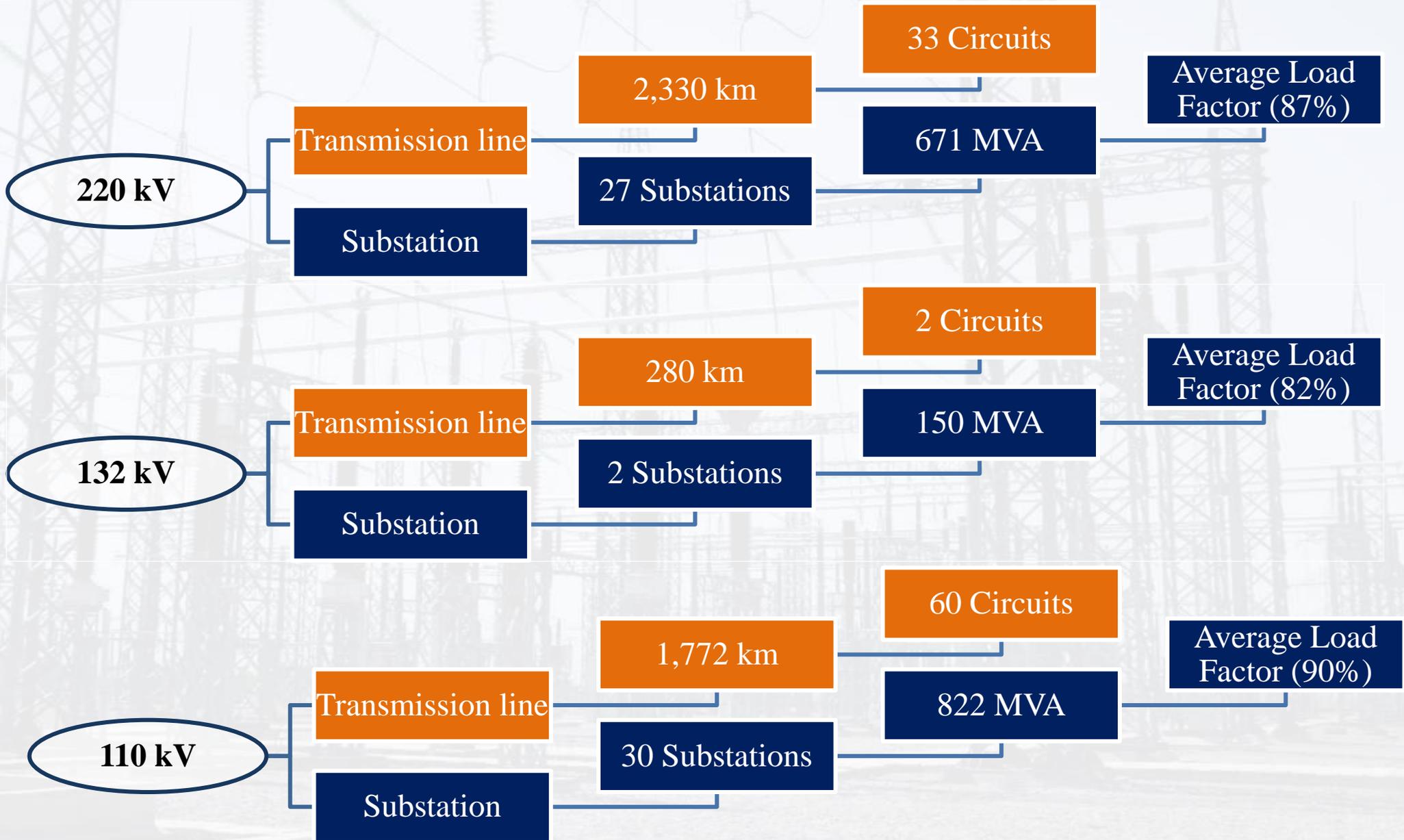
▪ Utilize renewable energy and promote sustainable development

▪ Increase stakeholder trust

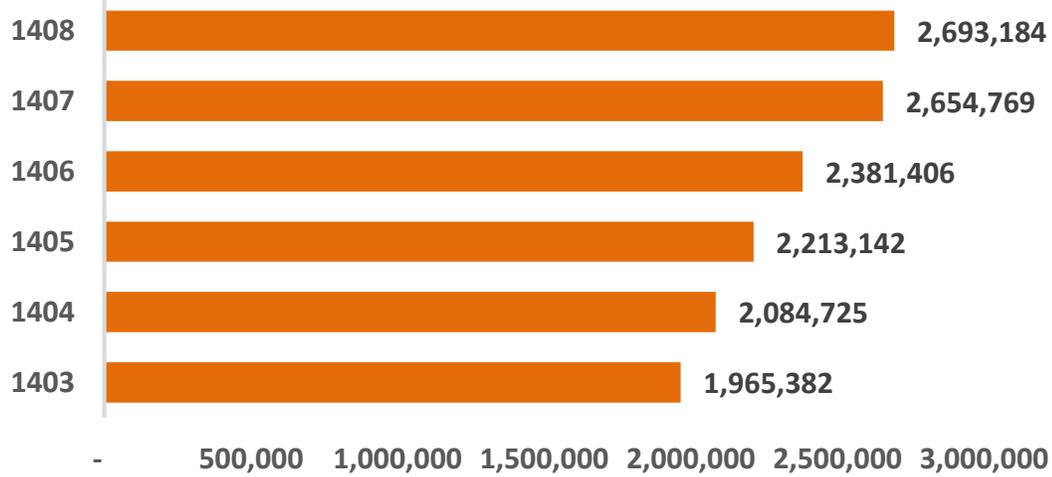
▪ Foster employee participation

▪ Improving customer services and empowering the workforce

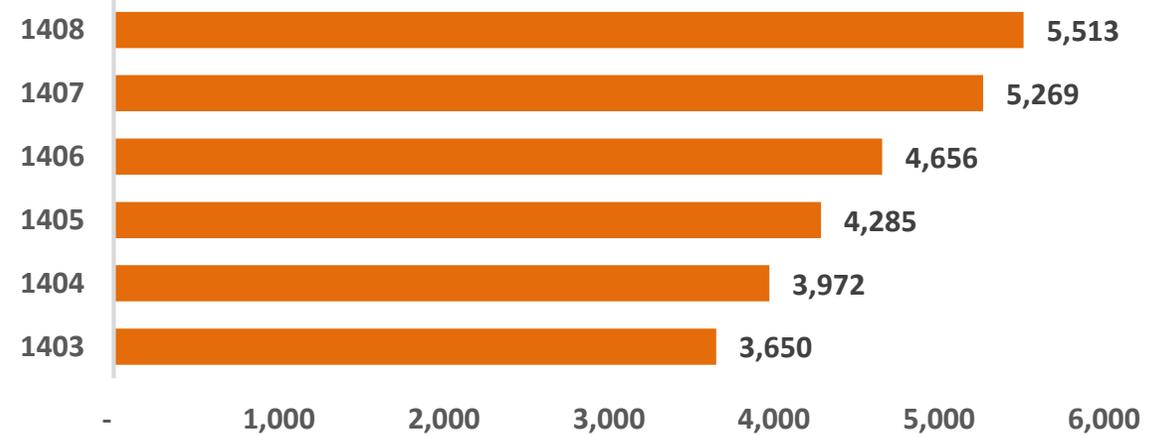
# Grid Capacity



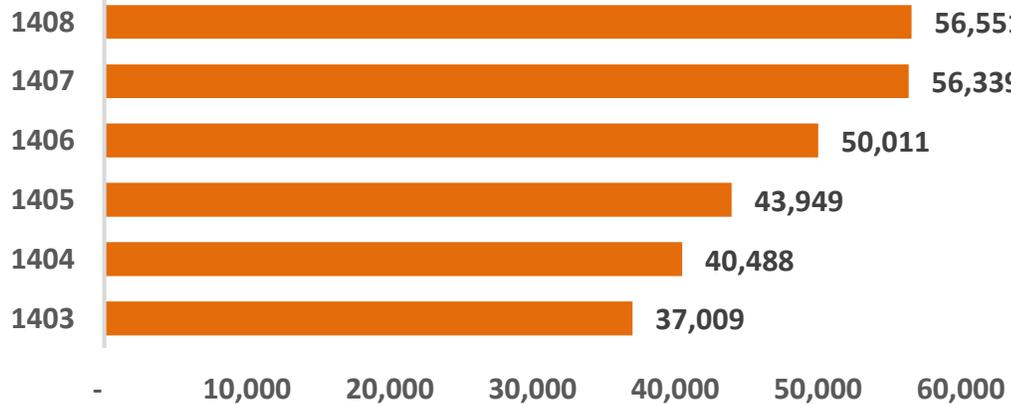
# Customers and Projected Growth



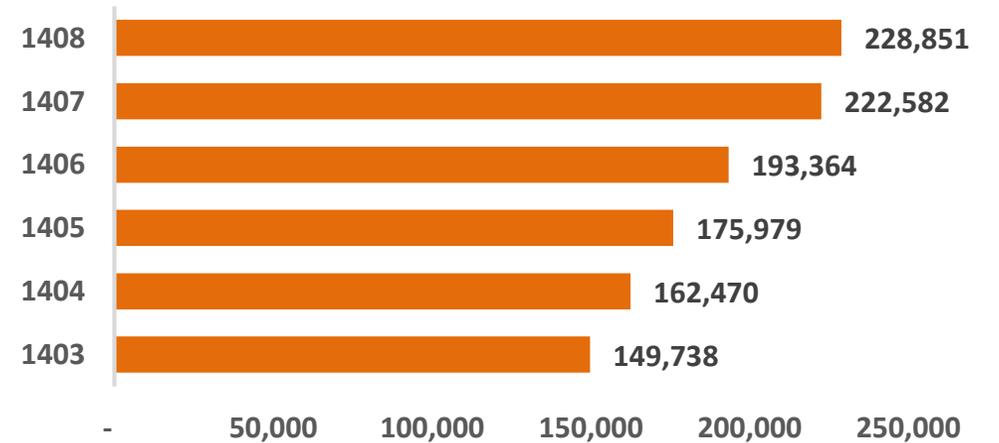
Residential



Industrial



Gov/Public



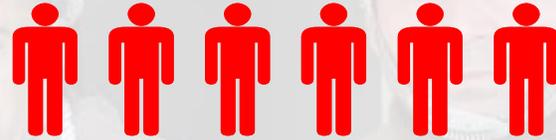
Commercial

**Operation /Technical Staff**



**4,429**

**Commercial Staff**



**2,037**

**Financial Staff**



**686**

**Administrative Staff**



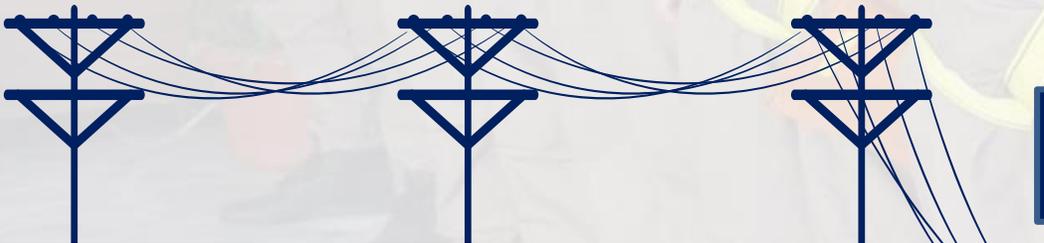
**1,786**

**Executive Office Staff**



**305**

**Total Employee - 9243**



8,009,930,514 kWh

In 1404, DABS Planned to supply 8.009 billion kilowatt-hours of electricity.

6,754,644,873 kWh

Imported Energy

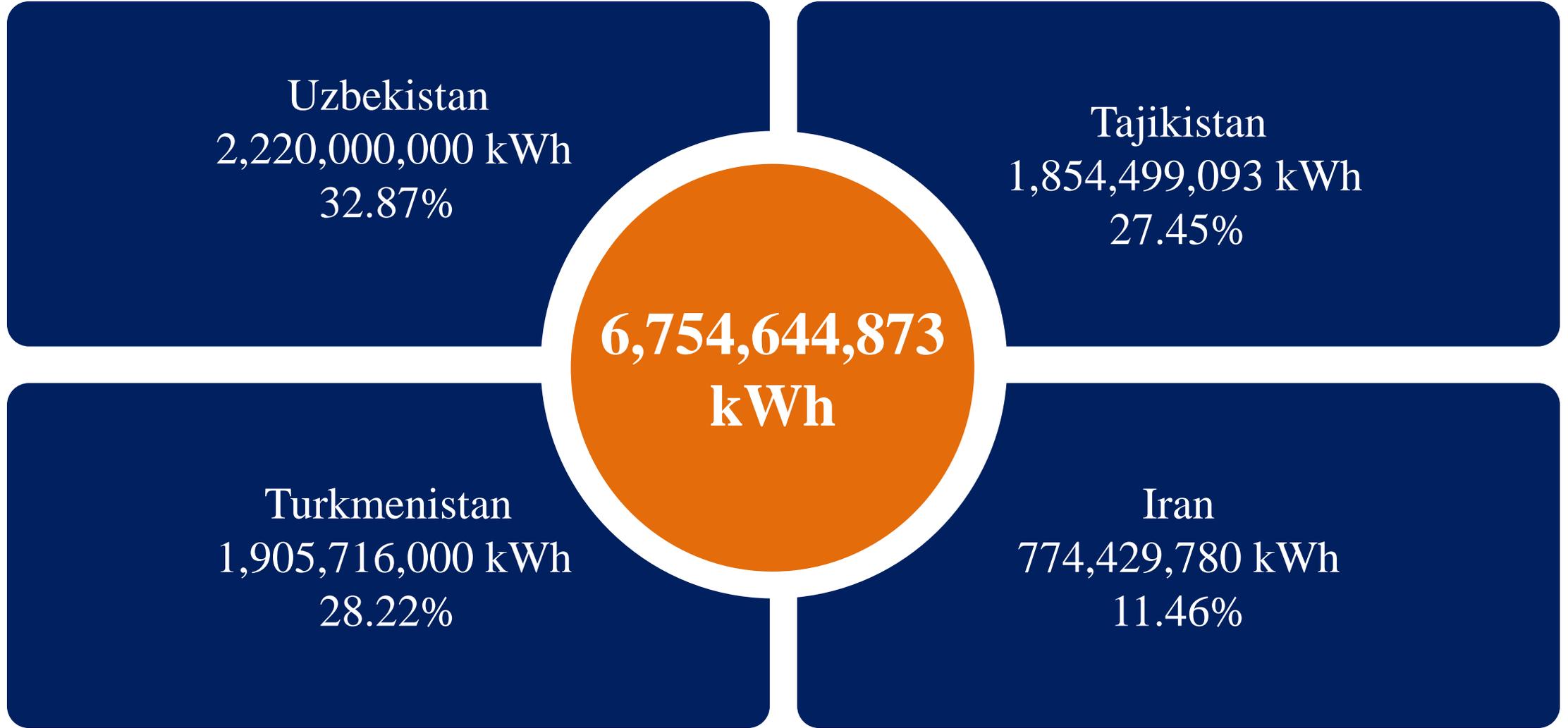
716,695,658 kWh

DABS Operated Resources Energy

538,589,983 kWh

Private Sector(IPP) Energy





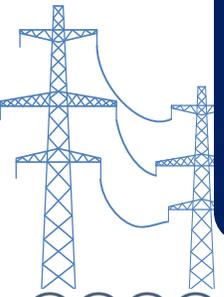
Hydro  
628,410,029 kWh  
87.68 %

Diesel Generators  
38,766,500 kWh  
5.4 %

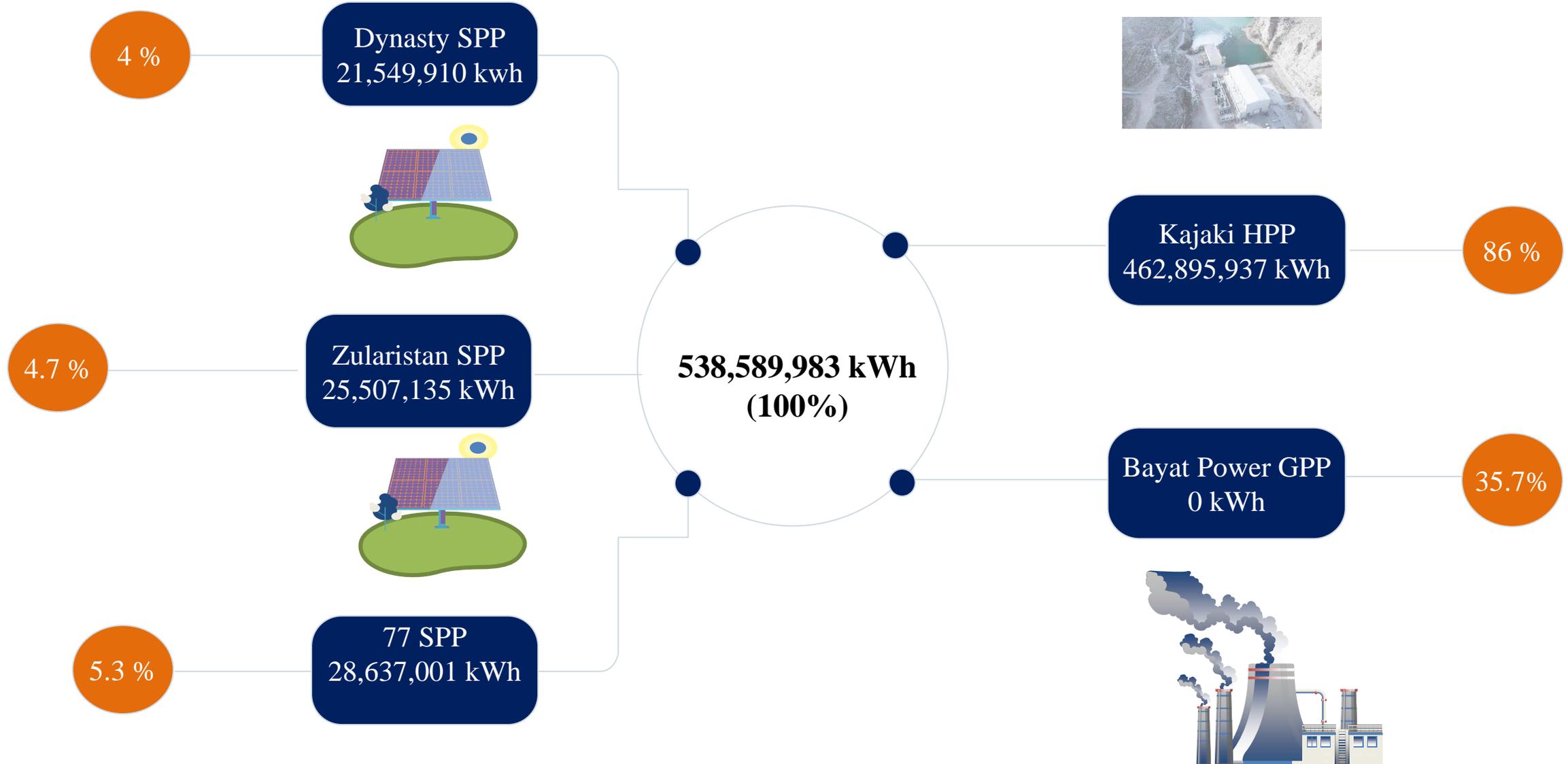
716,695,658  
kWh

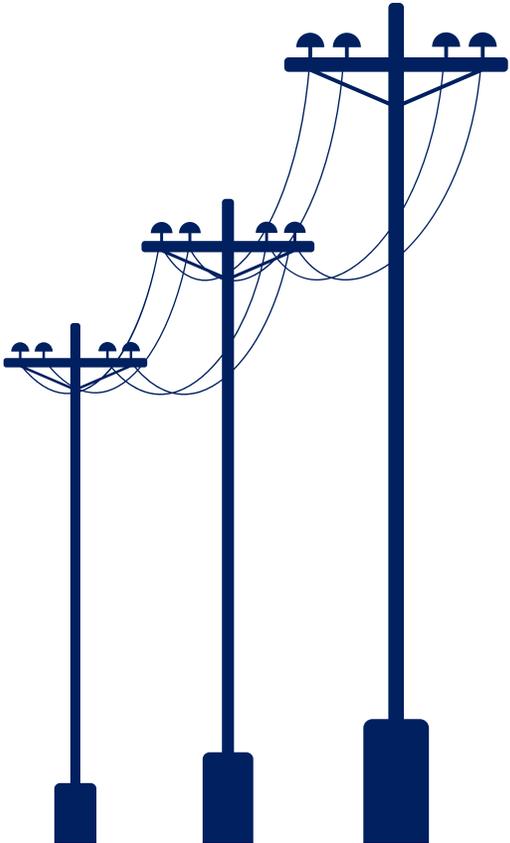
Thermal  
27,900,000 kWh  
3.9 %

Solar  
21,619,130 kWh  
3.02 %



# Private Sector Planned Energy Supply for 1404 (2025)

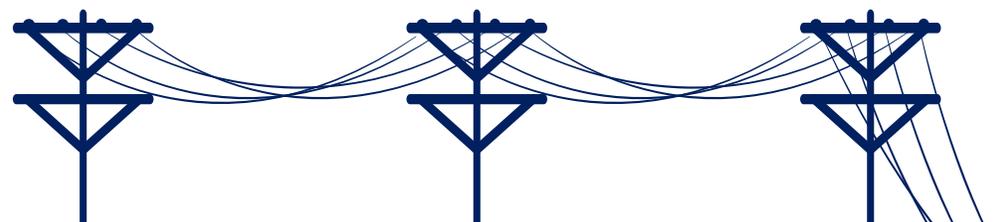




**01 NEPS**  
 Synchronized with Uzbekistan and Tajikistan  
 largest share of demand including Kabul.

**02 SEPS**  
 Has no interconnection currently for power  
 import and suffers almost 50% power deficit.

**03 WPS**  
 Synchronized with Turkmenistan  
 and Iran Covering Herat demand



01

## Add New Generation Capacities

- Deploy large- & small-scale Renewable and Non-Renewable Energy projects.

02

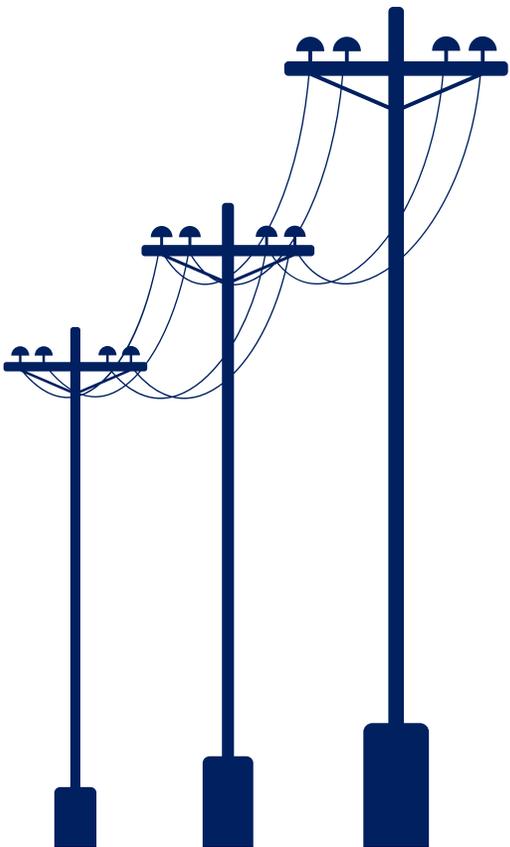
## Build HV Transmission Capacities

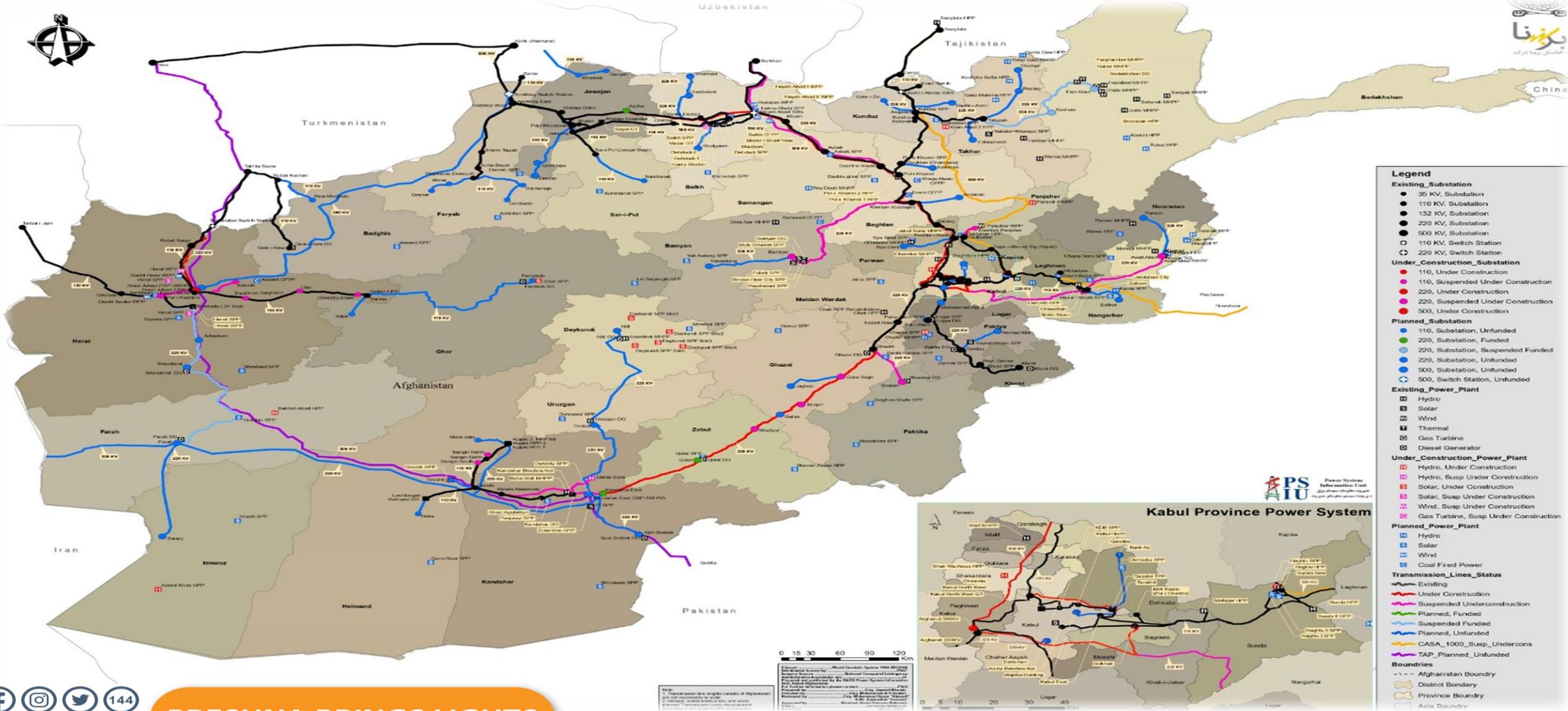
- Completion of TAP 500 kV Transmission line.
- Construction of the 500kV Transmission Network from Uzbek. (MOU Signed)
- Completion of Butekhak - Shiekh Mesry Nangarhar Transmission Line. (MOU Signed)

03

## Funding & Investment

- Support of international community to fund renewable energy projects.
- Attraction of National & International Investors at Energy Sector.





**Legend**

**Existing\_Substation**

- 35 KV, Substation
- 110 KV, Substation
- 132 KV, Substation
- 220 KV, Substation
- 500 KV, Substation
- 110 KV, Switch Station
- 220 KV, Switch Station

**Under\_Construction\_Substation**

- 110, Under Construction
- 110, Suspended Under Construction
- 220, Under Construction
- 220, Suspended Under Construction
- 500, Under Construction

**Planned\_Substation**

- 110, Substation, Unfunded
- 220, Substation, Funded
- 220, Substation, Suspended Funded
- 220, Substation, Unfunded
- 500, Substation, Unfunded
- 500, Switch Station, Unfunded

**Existing\_Power\_Plant**

- Hydro
- Solar
- Wind
- Thermal
- Gas Turbine
- Diesel Generator

**Under\_Construction\_Power\_Plant**

- Hydro, Under Construction
- Hydro, Susp Under Construction
- Solar, Under Construction
- Solar, Susp Under Construction
- Wind, Susp Under Construction
- Gas Turbine, Susp Under Construction

**Planned\_Power\_Plant**

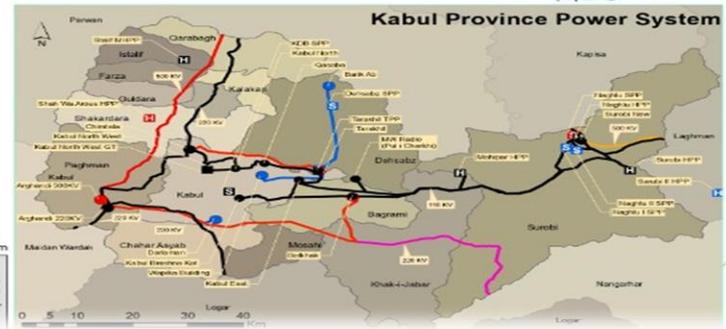
- Hydro
- Solar
- Wind
- Coal Fired Power

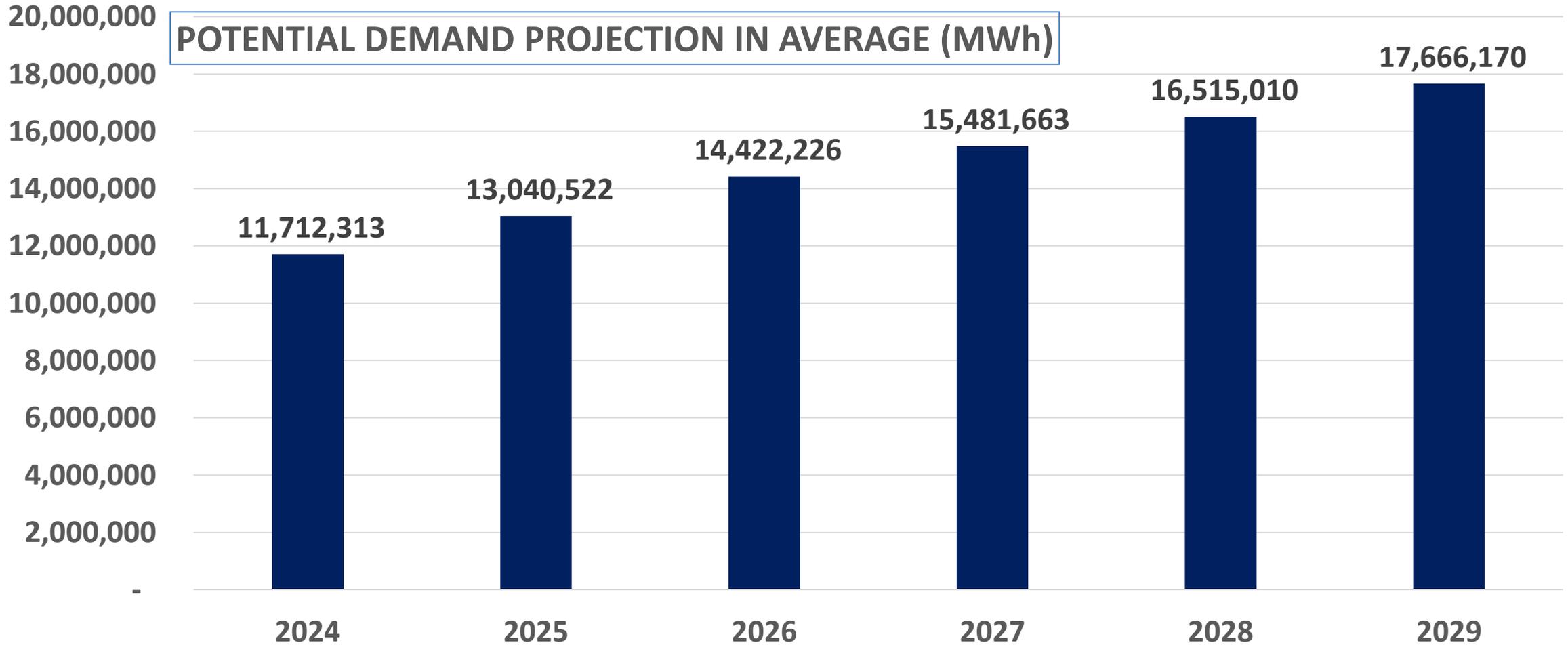
**Transmission\_Lines\_Status**

- Existing
- Under Construction
- Suspended Under Construction
- Planned, Funded
- Planned, Unfunded
- Suspended Funded
- Planned, Unfunded
- CASA\_1000\_Susp\_Under cons
- TAP\_Planned\_Unfunded

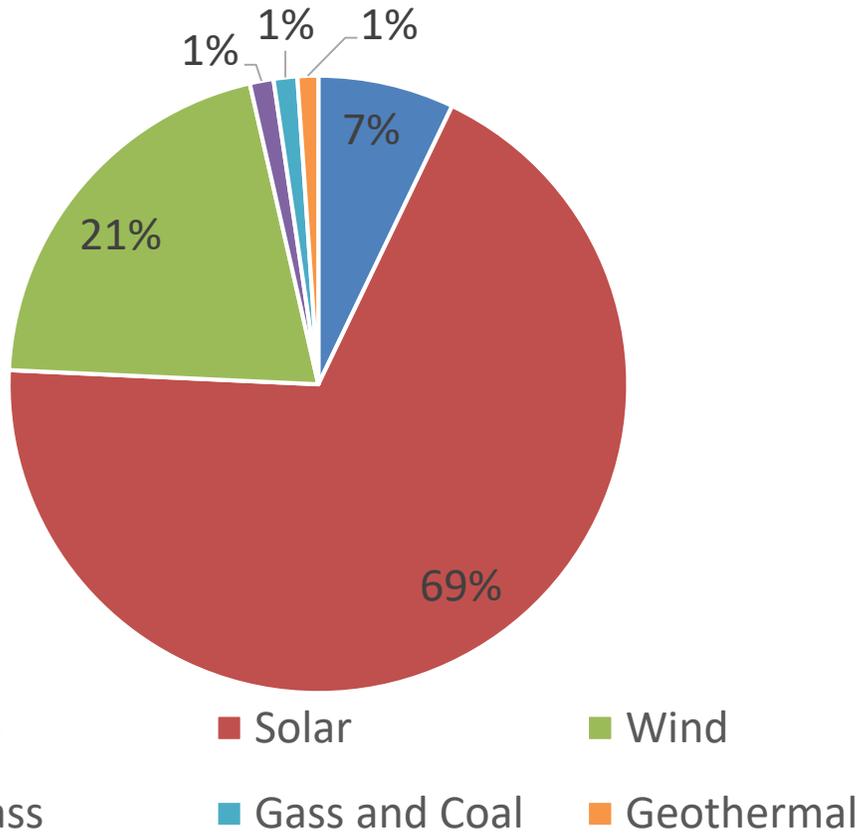
**Boundaries**

- Afghan Boundary
- District Boundary
- Province Boundary
- Asia Boundary





Energy Potential Percentage



Potential of Energy Resource by Capacity

No	Source	Capacity (MW)
1	Hydro	23,000
2	Solar	222,000
3	Wind	67,000
4	Biomass	4,000
5	Gas and Coal	4,000
6	Geothermal	3,500

DABS has prioritized the investment opportunities in the following majors:

## Construction of Power Plants

- Hydro

- Thermal

- Wind

- Solar (on grid and off grid)

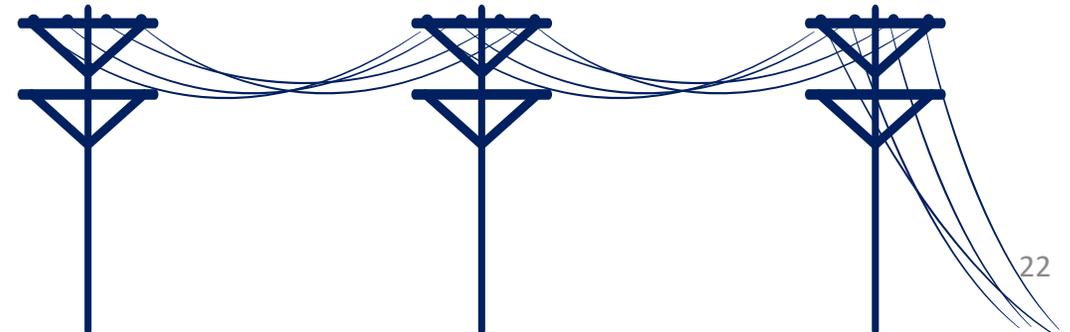
## Completing the Incomplete Projects of DABS

- Construction of Substation

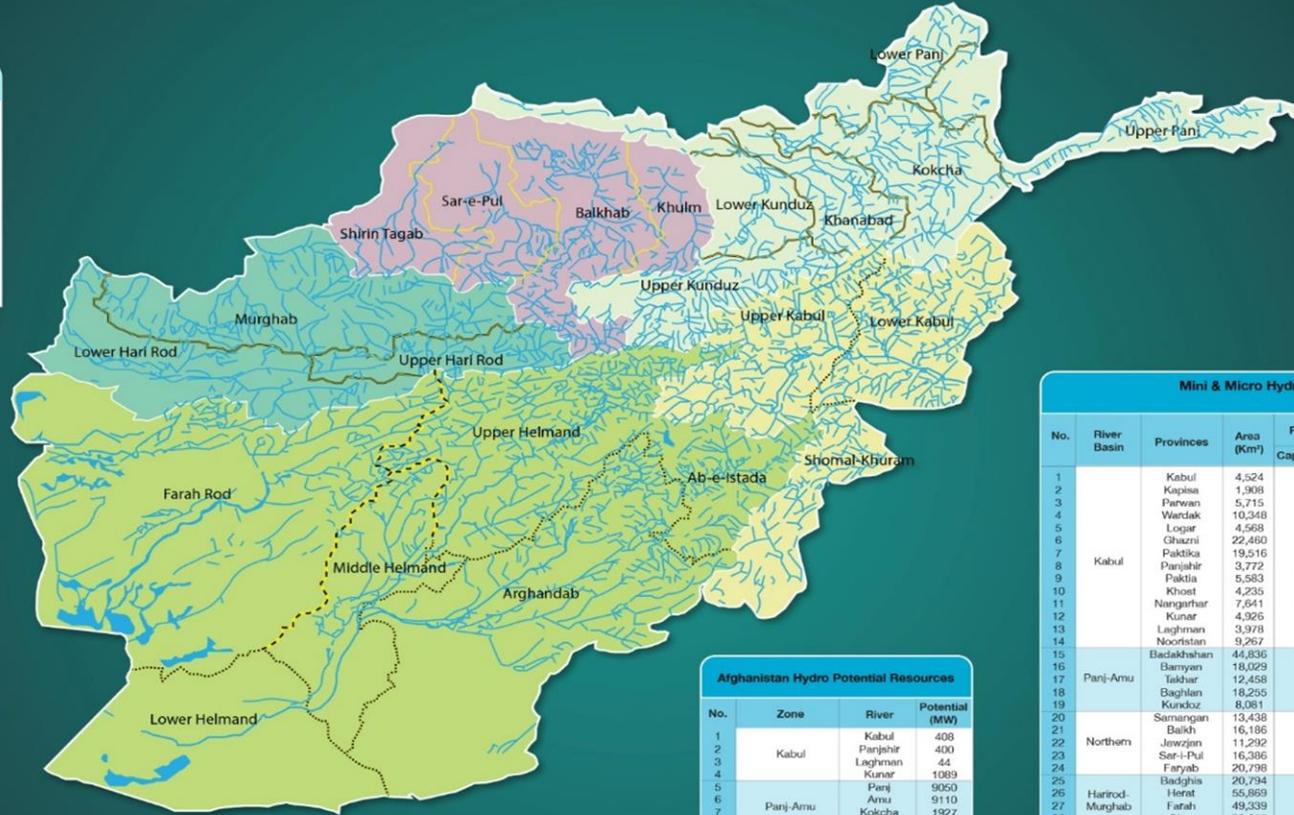
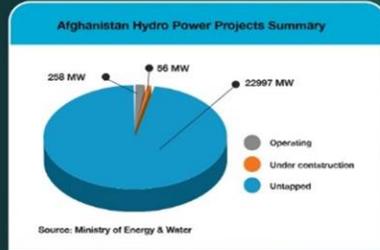
- Extension of Transmission Lines

- Extension of Distribution Networks

- Construction of Power Plants



## Afghanistan Hydro Resource Map (Including Mini & Micro Hydro Power Plants)



Afghanistan's hydro potential resources information is provided by the Renewable Energy Department of the Ministry of Energy and Water. The dataset provide information on hydro power potential, installed hydro power plants capacity and under construction hydro power projects capacity (including Mini & Micro Hydro Power Projects) in Afghanistan. The data is obtained from the National Renewable Energy Laboratory (NREL) of the U.S. Department of Energy, Kabul Polytechnic University, Ministry of Energy and water (Planning Department) and Renewable Energy Database

**Afghanistan Hydro Potential Resources**

No.	Zone	River	Potential (MW)
1	Kabul	Kabul	408
2		Panjshir	400
3		Laghman	44
4	Panj-Amu	Kunar	1069
5		Panj	9050
6		Ansu	9110
7	Northern	Kokcha	1927
8		Kunduz	50
9	Northern	Jawzjan	460
10		Balkh	300
11	Harirod-Murghab	Harirod	102
12		Murghab	100
13	Holmand	Holmand	190
14		Farah Rod	80
Total			23,310

Source: Ministry of Energy & Water, Kabul Polytechnic University

**Mini & Micro Hydro Power Projects in Afghanistan (up to 1 MW)**

No.	River Basin	Provinces	Area (Km <sup>2</sup> )	Projects Completed		Projects Surveyed		Total Zones
				Capacity (kW)	Number	Capacity (kW)	Number	
1	Kabul	Kabul	4,524	565	25	0	0	20,437
2		Kapisa	1,908	917	141	0	0	
3		Panwan	5,715	3810	228	0	0	
4		Wardak	10,348	621	85	5	1	
5		Logar	4,568	433	43	600	1	
6		Ghazni	22,460	875	93	0	0	
7		Paktika	19,516	0	0	0	0	
8		Panjahir	3,772	2839	100	0	0	
9		Paktia	5,583	824	79	1,000	3	
10		Khoist	4,235	72	8	0	0	
11		Nangarhar	7,641	1884	171	0	0	
12		Kunar	4,926	2141	127	2,200	3	
13		Laghman	3,978	561	60	0	0	
14		Nooristan	9,267	1068	79	0	0	
15		Badakhshan	44,836	12477	568	7,065	16	
16	Panj-Amu	Bamyan	18,029	2354	155	1,762	3	
17		Takhar	12,458	4979	214	5,396	11	
18		Baghlan	18,255	2399	172	0	0	
19		Kunduz	8,081	38	4	0	0	
20	Northern	Semangan	13,438	1116	52	900	2	
21		Balkh	16,186	554	33	0	0	
22		Jawzjan	11,292	0	0	0	0	
23		Sar-i-Pul	16,386	347	26	0	0	
24	Harirod-Murghab	Faryab	20,798	345	25	0	0	
25		Badghis	20,794	37	5	0	0	
26		Herat	55,869	334	29	0	0	
27	Murghab	Farah	49,339	0	0	0	1,891	
28		Ghor	36,657	1520	93	0	0	
29		Nimroz	42,410	5	1	0	0	
30	Holmand	Helmand	58,305	75	3	0	0	
31		Kandahar	54,845	1000	2	0	0	
32		Zabul	17,472	0	0	0	0	
33	Urozgan	Urozgan	11,474	0	0	0	0	
34		Daykundi	17,501	58	10	2,687	11	
Total			652,864	44,271	2,641	21,615	51	65,886

Source: Renewable Energy Department, Ministry of Energy & Water

23 GW  
Available  
Potential

425.9 MW  
Installed  
Capacity

744.192  
GWH  
Annual  
Generation

No	Location	Capacity (MW)	Distance from SS
1	Kabul ,Surobi 1 Extension	2x11	3.48km from Sarobi SS
2	Kabul ,Surobi 2	180	8km from Sarobi SS
3	Kapisa, Baghdara	240	13.74km from Ahmad Bek SS
4	Gulbahar, Panjshir	120	3.5km from Gulbahar SS
5	Badakhshan Kochi	332	NS
6	Kunar, Dab	450	NS
7	Kunar, Sagay	300	NS
8	Kunar,shaal	798	NS
9	Takhar, Gurda Gaw	237	101.16km form Taliqan SS
10	Kunar, Choonak	390	NS
11	Takhar, Qala Momayai(Kokcha)	445	30.2km from Taliqan SS
12	Badakhshan, Robat	141	NS
13	Tangi Daulat Sha, Laghman	4-5	NS
14	Watan Gatu,Laghman	3-8	NS
15	Puza-e-Leach, Ghor	4.1	NS

No	Project	Location	Capacity	Category
1	Rehabilitation of Darunta Hydro Power Plant	Nangarhar	3x3.85 MW	Power Generation
2	Rehabilitation of Pul-e-Khumri hydro power plant	Baghlan	3x3 MW	Power Generation
3	Rehabilitation of Jabal -Saraj hydro power plant	Parwan	5x0.5 MW	Power Generation
4	Rehabilitation of Mahipar Hydro Power Plant Unit - 1	Kabul	1x22 MW	Power Generation
5	Rehabilitation of Managi Hydro Power Plant Unit	Kunar	2x1 MW	Power Generation
6	Procurement and Supply of spare parts for (Naghlu, Darunt & Pul-E-Khumri-2) Hydro Power Plants	Baghlan	LOT	Power Generation

No	Province	District	Village name	Capacity (kW)
1	Balkh	Zari district	Centre and village	500
2	Balkh	Koshunda	Aqkobrog	500
3	Balkh	Sholgara		500
4	Takhar	Yangiqala	Kildash	1000
5	Takhar	Dasht-e-Qala		300
6	Takhar	Dasht-eQala	Centre	80
7	Takhar	Dasht-e-Qala		400
8	Takhar	Baharak	Centre	110
9	Daikondi	Khadir	Centre	2470
10	Daikondi	Ashtarlay		1820
11	Daikondi	Ashtarlay		1000
12	Daikondi	Khadir		152
13	Daikondi	Sang-e-Takht		132
14	Daikondi	Sang-e-Takht		288
15	Daikondi	Khadir	Centre	71
16	Daikondi	Sang-e-Takht		57
17	Daikondi	Sharestan		212
18	Daikondi	Nili	Nili	13800
19	Daikondi	Ashtarlay		5100
20	Bamayan	Wara	Centre	292
21	Bamayan	Waras	Centre	90
22	Bamyan	Panjab		190
23	Bamyan	Waras		434
24	Bamyan	Waras		563
25	Wardak	Hese Awal Behsod	Hese Awal Behsod	275
26	Nooristan	Wama		11380
27	Nooristan	Paroon		4770

1,800 MW

4,000 MW

Pre-Feasibility Study done

Total Potential in Afghanistan



No	Kinds of Project	Location	Capacity (MW)
1	Feasibility Study for Generation of Electricity from Coal (Thermal Power Plants) in Afghanistan	All Provinces	Not Available
2	Feasibility Study for Generation of Electricity from Gas (Thermal Power Plants) in Afghanistan	All Provinces	Not Available
3	Coal-Fired Power Plant	Baghlan, Khenjan	100
4	Coal-Fired Power Plant	Baghlan, Khawja Alwan	300
5	Coal-Fired Power Plant	Bamyan, Kahmard Saighan	400
6	Coal-Fired Power Plant	Balkh, Sholgarah,	750
7	Coal-Fired Power Plant	Herat, Karokh	150
8	Coal-Fired Power Plant	Kabul, Naghlu	100
9	Biomass Power Plant	Kabul, Khak-e-Jabar	30
10	Gas Power Plant	Jawzjan, Yatemtaq	50



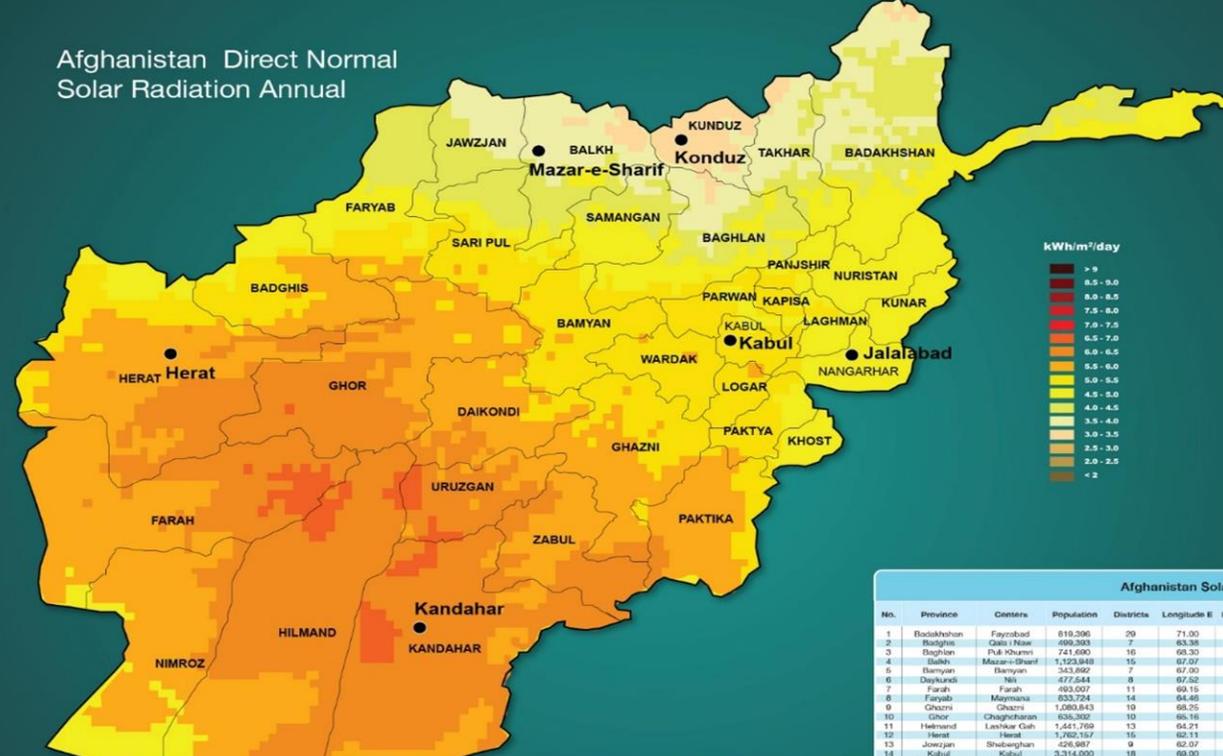
**222**  
GW  
Estimated  
Capacity

**300**  
Sunny  
Days/year

**5,5**  
kW/m<sup>2</sup>/day  
Averages

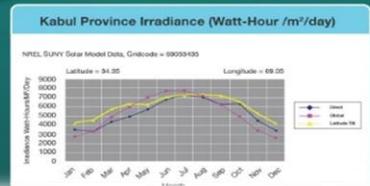


Afghanistan Direct Normal  
Solar Radiation Annual



No	Provinces	Province (km²)	Solar Radiation kWh/m²/day	Solar Energy Potential (MWh)	Capacity Solar Energy (PicoWatt Area) (MW)
1	Badkhabhan	44,838	5	3,738,325	3,738
2	Badkhis	26,794	6.15	2,133,286	6,528
3	Baghlan	18,256	6.05	1,103,479	1,256
4	Balkh	16,180	4.3	1,160,018	2,900
5	Bamyan	16,028	6.2	1,863,017	1,863
6	Daykundi	17,501	6.55	1,910,870	1,911
7	Farah	48,334	6.8	3,287,281	27,137
8	Faryab	20,798	5.4	1,871,784	4,679
9	Ghor	22,460	6.2	2,200,867	6,802
10	Herat	36,867	6.9	2,543,601	10,329
11	Helmend	58,305	6.85	6,666,490	33,282
12	Kandahar	55,969	6.33	6,207,698	29,520
13	Jawzjan	11,292	4.74	892,029	2,230
14	Kapisa	4,204	6.73	432,032	429
15	Kandahar	64,845	6.8	6,215,710	31,079
16	Kapisa	1,908	5.75	180,860	183
17	Khost	4,235	5.55	363,530	364
18	Kunar	4,926	5.46	447,436	447
19	Kunduz	8,081	3.8	511,790	1,270
20	Laghman	3,978	6.08	338,798	842
21	Logar	4,568	5.93	461,471	461
22	Nangarhar	7,641	6.3	674,964	1,687
23	Namroz	42,410	6.4	4,523,680	22,618
24	Nuristan	9,267	6.76	888,068	988
25	Paktia	5,563	5.49	608,932	610
26	Paktika	18,518	6.2	2,018,643	6,544
27	Pangshir	3,772	6.95	374,017	374
28	Parwan	6,715	5.75	547,897	548
29	Sar-e-Pul	13,438	6.2	1,164,609	2,912
30	Sar-e-Pul	16,380	6.05	1,692,215	4,131
31	Takhar	12,458	4.9	1,017,287	2,543
32	Uruzgan	11,474	6.83	1,308,090	6,530
33	Wardak	10,348	6.05	1,043,454	1,043
34	Zabul	17,472	6.6	1,862,778	6,864
<b>Total</b>		<b>622,764</b>	<b>6.6</b>	<b>65,862,912</b>	<b>222,662</b>

No.	Province	Centers	Population	Districts	Longitude E	Latitude N	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	Badkhabhan	Fayzabad	819,396	20	71.00	35.30	3736	4098	3830	4472	5188	6275	6654	7295	6933	4774	3843	2465
2	Badkhis	Qala i Naw	499,393	7	63.38	34.66	3608	4858	6673	6648	6364	7487	7638	7922	7930	7096	6330	3648
3	Baghlan	Pul Khumri	741,680	16	68.35	35.00	3028	3410	4079	5100	5274	6850	7110	7422	7263	5886	4217	2651
4	Balkh	Mazar-e-Sharif	1,123,948	15	67.07	36.42	3058	3921	4768	5529	5780	7159	7911	7324	6962	5827	3904	2443
5	Bamyan	Bamyan	343,892	7	67.00	35.00	3336	3599	4902	6034	6312	7021	7214	7561	7575	6656	4471	2319
6	Daykundi	Ni	477,644	8	67.62	34.53	3306	3913	5153	6847	8328	9328	7358	7208	7897	6700	6806	4069
7	Farah	Farah	493,007	11	69.15	34.95	3336	3947	6954	6503	6329	7195	7259	7452	7296	6702	6475	4000
8	Faryab	Maimana	833,724	14	64.46	35.54	3356	3681	5315	6556	5670	7157	7376	7740	7645	6457	4551	2419
9	Ghor	Ghor	1,080,843	10	68.25	33.33	3336	4065	6312	6744	6337	7172	7475	7383	6841	6418	4225	
10	Ghor	Chaghchayan	805,302	10	69.16	34.31	3336	4060	6409	6686	6386	7498	7652	7627	6833	7066	5666	2898
11	Helmend	Leinkhar Gah	1,441,769	13	64.21	31.35	3336	6047	6190	6567	7269	7235	6526	7269	7235	6826	5202	3624
12	Herat	Herat	1,762,157	15	62.11	34.21	3336	4778	5451	6611	6167	7655	7408	7730	7733	6826	5202	3624
13	Jowzjan	Shinwari	426,987	9	62.07	34.20	3336	4760	5471	6605	6170	7443	7392	7170	7707	6826	5179	3675
14	Kabul	Kabul	3,314,000	18	69.00	34.30	3336	4491	5702	6272	6236	7035	7214	7346	7206	6584	6317	4173
15	Kandahar	Kandahar	1,181,100	9	66.42	31.36	3336	4766	5443	6543	6132	7160	7176	7258	7166	6292	4665	3771
16	Kapisa	Mahmud-i-Razi	358,295	7	69.20	35.00	3336	4708	5468	5943	6132	7160	7176	7258	7166	6292	4665	3771
17	Khost	Khost	638,849	13	70.00	33.30	3336	5123	5678	6482	6196	6649	6929	6767	6622	6296	4465	4624
18	Kunar	Abdabad	413,008	5	71.04	34.52	3336	4916	6131	6436	6782	6932	6968	6971	6327	6668	5849	4174
19	Kunduz	Kunduz	820,000	7	68.51	36.40	3336	3733	4642	4964	6395	6765	6878	7021	6703	6330	3913	2016
20	Laghman	Melalband	389,280	5	70.10	34.30	3336	4642	5982	6086	6191	6842	6842	6842	6166	5085	4246	
21	Logar	Pul-i-Alam	322,704	7	69.00	34.00	3336	4255	5982	6436	6334	7128	7215	7413	7301	6638	5442	4189
22	Maidan Wardak	Maidan Wardak	529,343	9	68.00	34.00	3336	4702	5400	6168	6070	7023	7163	7418	6703	6706	5267	3626
23	Nangarhar	Jalalabad	1,342,514	23	70.00	34.20	3336	4769	5403	5983	6118	6773	6880	6880	6300	4744	4217	
24	Namroz	Zaranj	117,891	5	61.51	30.57	3336	5622	5995	6411	6325	7102	7028	7398	7478	6964	5664	5107
25	Nuristan	Nuristan	130,864	7	71.00	36.20	3336	3638	4774	5410	6171	6466	6267	6586	6249	6530	4647	2969
26	Paktia	Gardaz	415,000	11	69.15	33.30	3336	3632	5956	6689	6334	6847	6986	7219	7282	6986	5849	4521
27	Paktika	Shirazan	809,772	15	69.12	33.36	3336	3932	5956	6569	6334	6847	6986	7219	7282	6986	5849	4521
28	Pangshir	Charkar	139,625	5	70.06	36.33	3336	4065	4403	5269	6033	6996	7244	7334	7000	5786	4003	2860
29	Parwan	Charkar	491,870	9	69.00	35.00	3336	4647	5408	6008	6136	7159	7229	7517	7257	6374	4810	3465
30	Sar-e-Pul	Sar-e-Pul	278,000	4	67.33	36.00	3336	3958	6048	6387	6666	7063	7276	7033	7251	6626	4229	2752
31	Sar-e-Pul	Sar-e-Pul	565,400	7	65.50	36.20	3336	3952	4519	5399	6078	7017	7184	7350	7070	6441	3856	2482
32	Takhar	Takhar	820,218	16	69.11	36.45	3336	4264	5041	5648	6867	7161	6867	6867	6867	6867	6867	2428
33	Uruzgan	Tarekat	320,589	6	66.50	30.00	3336	3764	4443	5299	6027	6499	6765	6827	6499	4760	3169	2546
34	Zabul	Golat	243,899	9	67.00	32.00	3336	4682	6518	7240	6947	7390	7255	7537	7516	7019	5722	3899



This informational map is provided by the Renewable Energy Department of the Ministry of Energy and Water. The dataset and charts provide information on solar energy potential in Afghanistan.  
The data is obtained from the National Renewable Energy Laboratory (NREL) of the U.S. Department of Energy and the Renewable Energy Department (RED) of the Ministry of Energy and Water.

No	Kind of Projects	Location	Capacity (MW)
1	Solar-Power Plant	Kunduz	10
2	Solar-Power Plant	Logar, Pul-e- Alam	40
3	Solar-Power Plant	Samangan	5-10
4	Solar-Power Plant	Balkh, Dehdadi	15
5	Solar-Power Plant	Baghlan, Pol-e-Khomri	16
6	Solar-Power Plant	Laghman, Dasht-e-Baba	10
7	Solar-Power Plant	Balkh, Khulm	10
8	Solar-Power Plant	Kabul, ShakarDara	20
9	Solar-Power Plant	Kapisa, Tap-e-Ahmad Bic	80
10	Solar-Power Plant	Parwan, Barikab	40
11	Solar-Power Plant	Kapisa, Dasht-e-Bolaghian	40

No	Province	District	Village name	Capacity (kW)
1	Nangarhar	Momand Dara	Gozarga Trukham	2000
2	Nimroz	Khash	Center of District	2000
3	Farah	Gulistan	Center of District	1000
4	Ghor	Lal Sarjangle	Center of District	1500
5	Dikundi	Miramor	Chaprasak village	1000
6	Uruzgan	Dehrawat	Zartala	2000
7	Ghazni	Nawur	Chaprasak village	1000
8	Paktika	Wazakhwa	Chaprasak village	1000
9	Kunduz	Khanabad	Shorab Mosazai	2000
10	Balkh	Kishindah	Zaree	1500
11	Jowzjan	Darzab	Chagana/gizraw	1500
12	Sari Pul	Kuhistanat	Center of District	1000
13	Faryab	Kohistan	Center of District	1000
14	Herat	Shindan	Qali Mohamad	2000
15	Helmand	Garm Seer	Center of District	1000
16	Kandahar	Shorawak	Center of District	1000
17	Zabul	Shamal Zayee	Zangeer	1000
18	Paktiya	Zurmat	Center of District	2000
19	Wardak	Jalriz	Kota Ashrow	500
20	Parwan	Sya Gerd	Wasgher	2000
21	Paktika	Zarghon	Shahr	2000
22	Baghlan	Dashte ghor	Azizan baba	2000

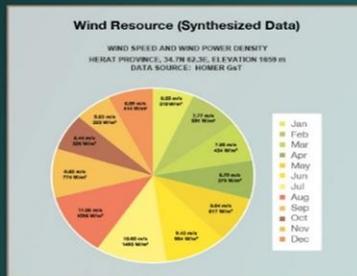
## Afghanistan Wind Resource Potential Map



**67GW**  
Estimated  
Capacity

**Annual  
Max Wind  
Speed (13  
m/s)**

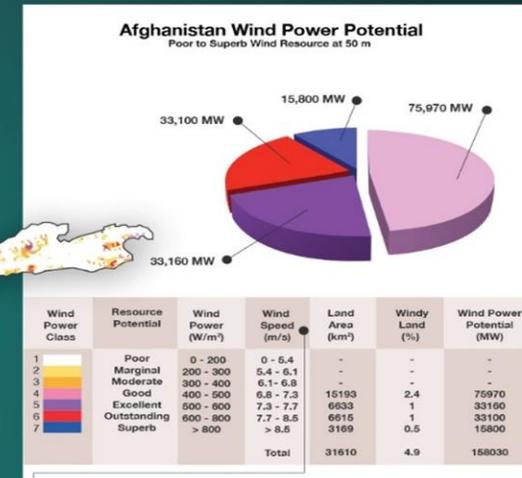
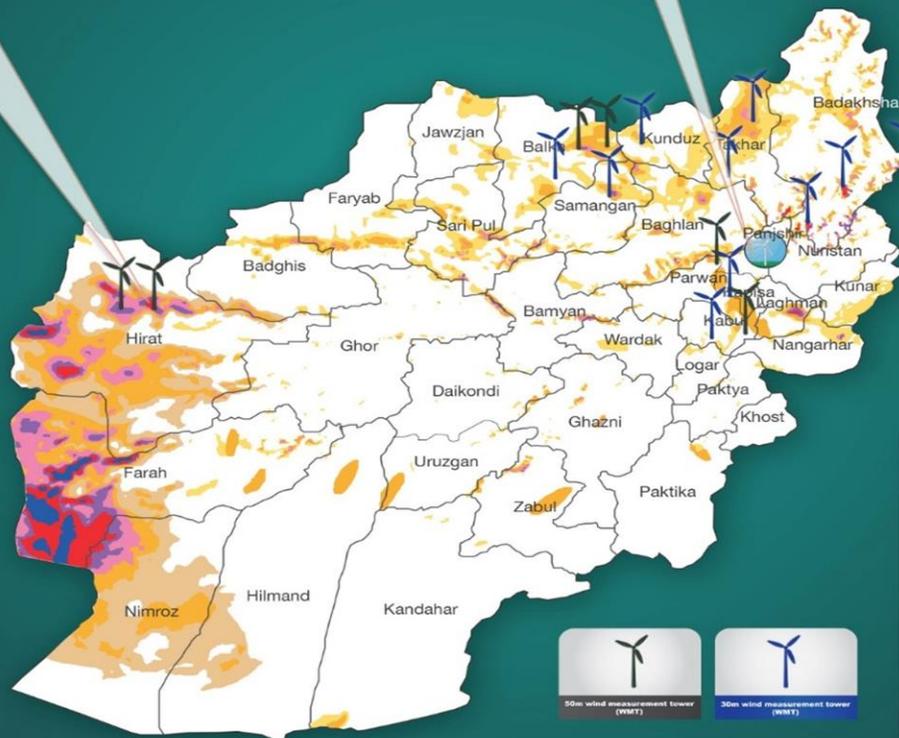
**Annual  
Min Wind  
Speed (3  
m/s)**



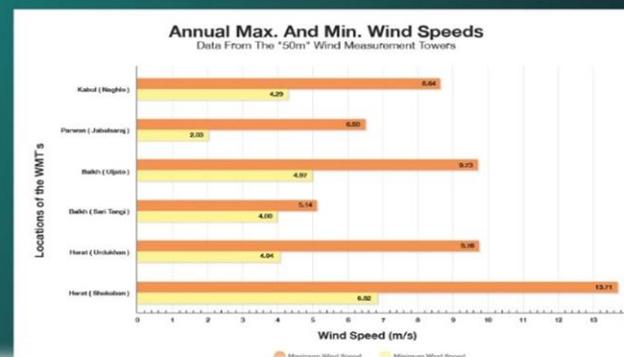
**Afghanistan Wind Resource Per Province**

No.	Province	Province Area (km²)	Windy Area (Wind Class 4 to 7) (km²)	Wind Energy Potential (MW)	Feasible Wind Energy Capacity (MW)
1	Badakhshan	44836	1428	3314	331
2	Badghis	20794	410	762	191
3	Baghlan	18255	1064	2093	208
4	Balkh	16186	1689	3145	786
5	Bamyan	18029	100	240	24
6	Daikundi	17501	-	-	-
7	Farah	49339	19270	61353	30677
8	Faryab	20798	560	1008	252
9	Ghazni	22460	93	191	48
10	Ghor	36657	160	336	84
11	Helmand	58305	1040	1872	936
12	Herat	35969	14694	36247	18473
13	Jawzjan	11292	95	171	43
14	Kabul	4524	230	414	41
15	Kandahar	54845	130	234	117
16	Kapisa	1908	450	810	81
17	Khost	4235	-	-	-
18	Kunduz	8081	180	324	81
19	Kunar	4926	40	72	7
20	Langrhan	3978	460	1020	255
21	Logar	4568	-	-	-
22	Nangarhar	7641	300	582	146
23	Nimroz	42410	10130	21450	10725
24	Nuristan	9267	90	-	-
25	Paktia	5583	-	-	-
26	Paktika	19516	220	396	99
27	Panjshir	3772	80	144	18
28	Parwan	5715	705	1269	127
29	Samangan	13438	503	1064	266
30	Sar-e-Pul	16386	385	729	182
31	Takhar	12458	2547	4795	1199
32	Uruzgan	11474	550	990	495
33	Wardak	10348	80	180	18
34	Zabul	17472	860	1632	816
<b>Total</b>		<b>652864</b>	<b>58543</b>	<b>147563</b>	<b>66726</b>

Note:  
The data in the table illustrate estimated values. The table does not take into account Poor (Class 1), Marginal (Class 2) and Moderate (Class 3) wind resources potential.  
(Credit to NREL for the wind power classification)



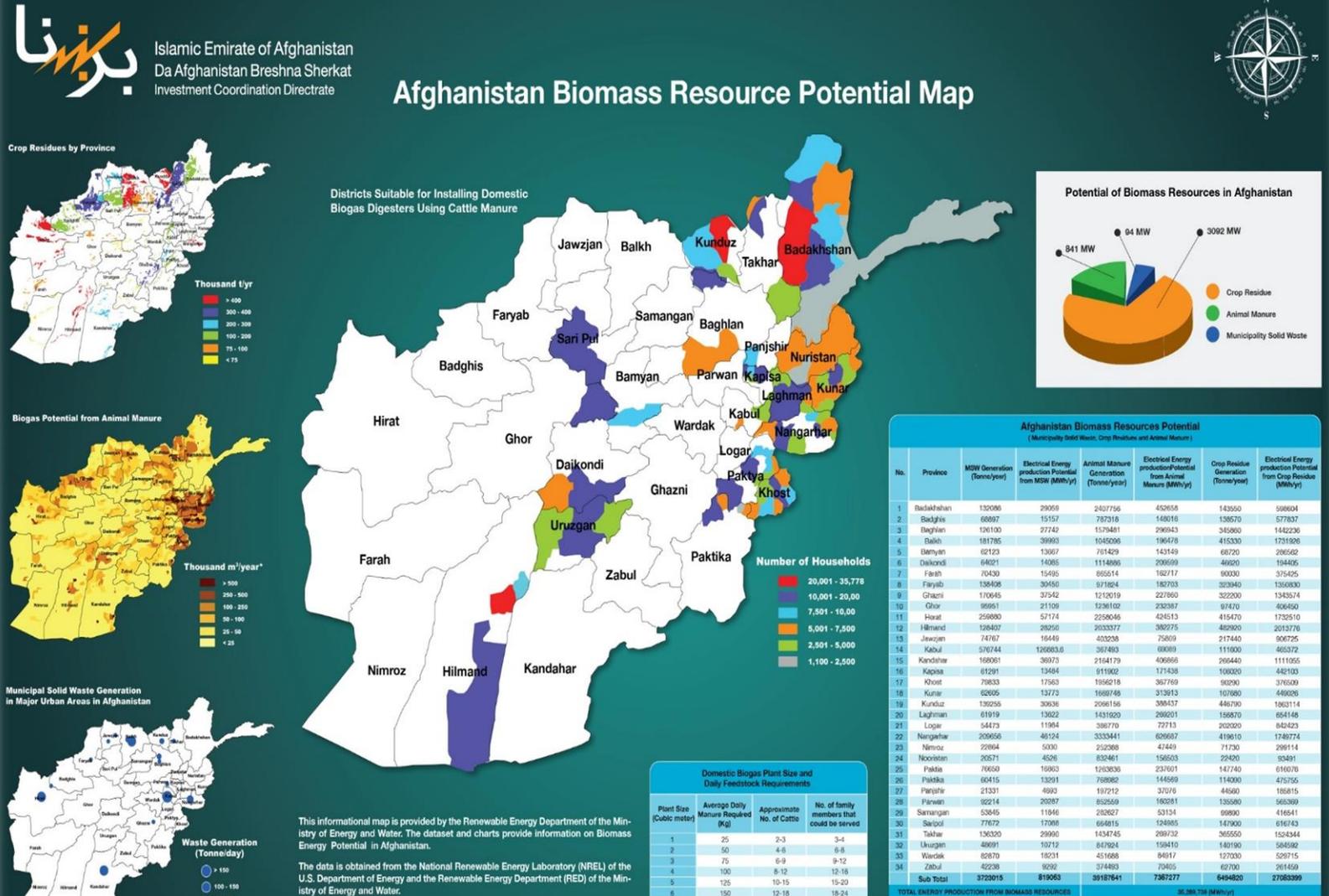
Wind speeds are based on a Weibull K value 1.6 at 1500 m  
Wind Potential Estimates:  
- 31,600 km² windy area, almost 5% of Afghanistan's total land area (650,000 km²)  
- 106,000 MW of potential installed wind capacity (5.9 MW/km²)  
- Almost 12% of Afghanistan's land area has "Class 5" or better wind resource



This informational map is provided by the Renewable Energy Department of the Ministry of Energy and Water.

No	Kind of Projects	Location	Capacity (MW)
1	Wind-Power Plant	Herat, Dasht-e-Hawz	40
2	Wind-Power Plant	Herat, Dasht-e-Taraka	40
3	Wind-Power Plant	Balkh, Nayeb Abad 1	40
4	Wind-Power Plant	Balkh, Nayeb Abad 2	40
5	Wind-Power Plant	Balkh, Hairatan	40

- Biomass projects can use of organic materials such as wood, rice husks, bagasse, corn cobs, and coconut shells, which can be used to generate heat, steam, and/or electricity;
- Organic wastages of Kabul city have been collected since many years at Gazak area of Kabul;
- The preliminary survey indicate a capacity of about 200MW power generation is available.



\* To convert MSW, Animal Manure and Crop residues to electricity, the coefficients used are 550kwh/tonne of organic waste, 155 kwh/tonne of Animal Manure and 4170 kwh/tonne of Crop residues respectively.  
Source: "Assessment of Biomass Resources in Afghanistan" by NREL - January 2011

## Kabul, Khak-e-Jabar Biomass Power Plant

Daily Waste Dispatched  
2500 tons

Percentage of Organic Waste  
50-70%

Calorific value of organic Waste  
2800 kcal/kg

### Steps Taken by Project Team

Survey and data collection of project has been done.

The Pre-feasibility study of project has been conducted.

The require land of the project is identified.

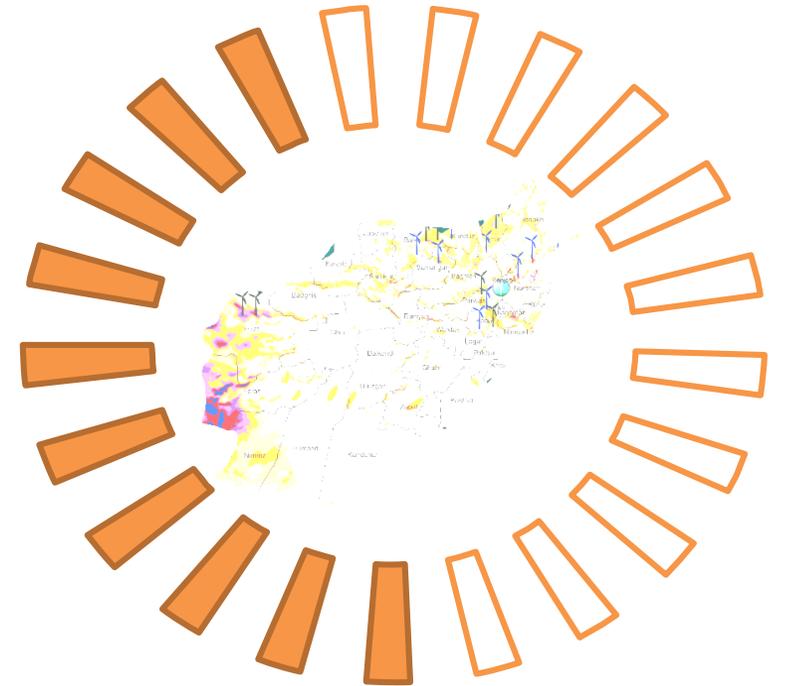
### Steps Needed

Investment Proposal

HEC Approval

PPA Contract

Revenue Collection



No	Project	Location	Capacity	Category
1	TAPP-500 Transmission Line (500 kV) from Mary to Herat 96 km, Herat-Kandahar 570 km, Kandahar to Quetta 112 km. Substations in Herat 500/220/20 kV, 3×133 MVA and Kandahar 500/220/20 kV, 3×160 MVA	Herat, Kandahar	500 kV	Transmission line & Substation
2	Transmission line from Shindand to Farah (176km)	Herat, Farah	220Kv	Transmission Line
3	Transmission Line from Pole-Hashemi to Shindand (135km)	Herat	220Kv	Transmission Line
4	Transmission Line from Ghazni to Sharana (68.5km)	Ghazni, Paktika	220Kv	Transmission Line
5	Transmission Line from Gulbahar to Panjshir (18.4km)	Gulbahar	110KV	Transmission Line
6	Transmission Line from Gulbahar to Barik Aab (38km)	Gulbahar	220Kv	Transmission Line
7	Farah Substation (2x40MVA)	Farah	220/20	Substation

No	Project	Location	Capacity	Category
8	Sharna New Substation & Ghazni Substation Expansion (2x16MVA)	Ghazni, Paktika	220/20	Substation
9	Panjshir Substation (2x16MVA)	Panjshir	110/20	Substation
10	Sheen Dand Substation (2x16MVA)	Herat	220/20	Substation
11	Adraskan Substation (2x16MVA)	Herat	220/20	Substation
12	Mohammad Agha Substation	Logar	220/20	Substation
13	Barikab 220/20 kV substation	Parwan	220/20	Substation
14	Darulaman Substation (2X40)	Kabul	220/20	Substation

## Financial & Economic Advantages

- Government supports the investments;
- Investment opportunities with high return;
- Reliable investment & PPP models;
- Low cost for doing business;
- Market with few competitors;
- Abundant of natural resources;
- Young and inexpensive labour force;
- Centre for resolution of trade disputes;
- Access to the global market through regional relationships;
- Bilateral and multilateral trade agreements;
- Membership in the World Trade Organization.

## Our Facilities to the Investors

- Illuminating the investment opportunities to the investors;
- Providing required information on investment opportunities;
- Providing land in coordination with other authorities for implementing the projects;
- Facilitating the legal framework for the implementation of the projects;
- Facilitating the administrative processes of the projects;
- Providing technical support to the investors as required;
- Granting VGF as per the significance of the projects.



**Step 1:** Investors to send an official “Letter of Interest” to DABS to express their investment interest, and DABS to introduce investment opportunities to the investors & requests the required information;

**Step 2:** Investor to submit the “Concept Proposal” to the Inter-Ministerial Investment Committee of the Economic Deputy of the Prime Minister of the Islamic Emirate of Afghanistan, and the Inter-Ministerial Investment Committee will refer the “Concept Proposal” to DABS / related authorities for analysis, review and negotiation;

**Step 3:** DABS to review the “Concept & Final Proposal” technically, financially & legally in coordination with related authorities, and the Investor to conduct “Feasibility & Technical Studies” of the specific project in coordination with DABS;

**Step 4:** Investor to submit “Final Proposal” including “Detailed Financial Model” of specific project to DABS, and negotiations on technical, financial, commercial/tariff and legal issues will be held between DABS and the investor;

**Step 5:** DABS to present the “Investment Proposal Report” for confirmation/approval to DABS Senior Management Group “SMG” meeting, and subsequently to present the “Final Investment Proposal Report” to the related authorities, Inter-Ministerial Investment Committee and to the Economic Commission of I.E.A for approval;

**Step 6:** The Investment Agreement/PPA will be arranged and signed between the parties, and finally will be approved by the Economic Deputy of the Prime Minister of the Islamic Emirate of Afghanistan.

We are ready to Facilitate and Accept investments in the electricity sector, within the framework of the following models:

- Musharakah

- Murabaha (Cost - Plus Financing)

- Joint Ventures

- Public Private Partnership (PPP) Models

- Build-Operate- Transfer (BOT)

- Build-Own-Operate (BOO)

- Build-Transfer (BT)

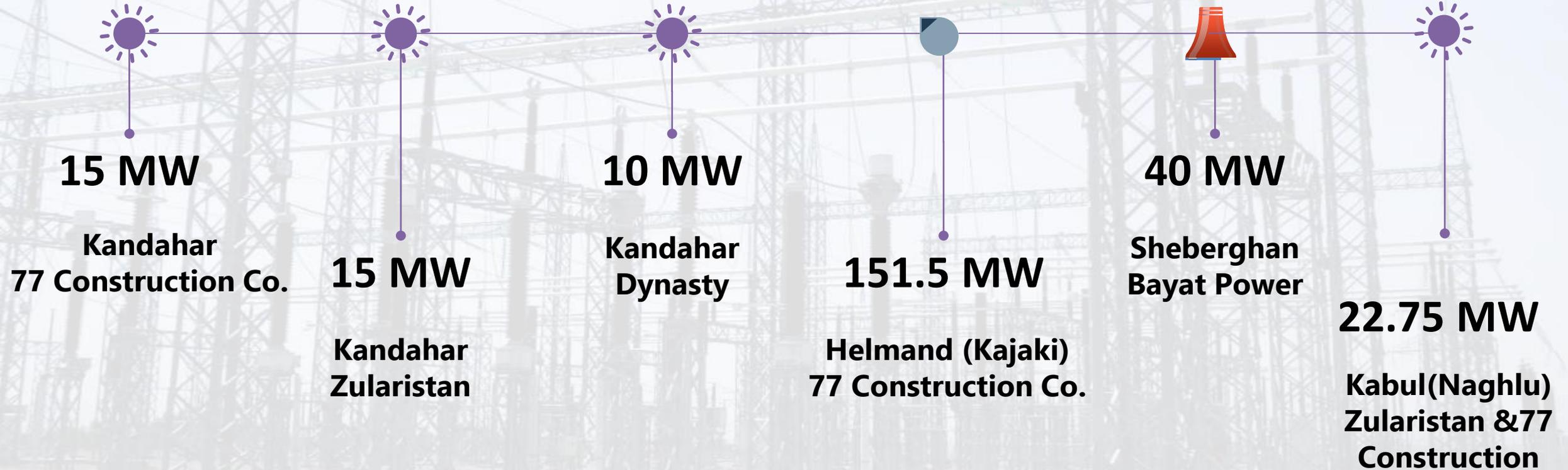
- Build-Own-Operate- Transfer (BOOT)

While DABS recommends these models for investment, it is flexible to negotiate any other model suggested by investors, provided that it does not conflict with Islamic law and regulations.

We frame our collaborations in the following legal frameworks:

- **Bilateral and Multilateral Memorandum of Understanding (MOU)**
- **Investment and Partnership Agreements**
- **Implementation Contract**
- **Investment Return Agreement**
- **Power Purchase Agreement (PPAs):**

## Signed PPA's (Operational)



The 40 MW Sheikh Mesri SPP and 50MW TPP have been approved and is currently under (PPA) preparation.

No	Project Name	Location	Investor	Status
1	Sheburghan-Dasht E Alwan 500kV, 305.17km Transmission line	Baghlan	Afghan Invest	Under Work
2	Dasht E Alwan Substation Extension (Line Bay, Reactor Bay including Reactors)	Baghlan	Afghan Invest	Under Work
3	Noorul Jihad SS- Pul e Hashemi SS Single Circuit 40km, 220kV Transmission Line	Herat	ZASU AFG KABUL MELLI	Agreed
4	Pul E Hashemi (2x43+2x60) MVA Substation	Herat	ZASU AFG KABUL MELLI	Agreed
5	Procurement and Installation of 2x40MVA Mobile GIS Substation	Herat	ZASU AFG KABUL MELLI	Agreed
6	Dasht E Alwan – Arghandi 500kV, 278km Transmission Line Extension	Baghlan - Kabul	Awfi Bahram Construction	Under Work
7	Arghandi 400MVA Substation Remaining works	Kabul	Awfi Bahram Construction	Under Work
8	2x80MVAR Reactor bay Procurement and Installation in Arghandi Substation	Kabul	Awfi Bahram Construction	Under Work
9	Tarkhil New (2X63MVA-220/110KV & 2X63MVA-220/20KV) Substation	Kabul	Awfi Bahram Construction	Under Work
10	220kV, Double circuit 23km Transmission line from Chemtala to Tarakhil	Kabul	Awfi Bahram Construction	Under Work
11	Butkhak New (2X63MVA-220/110KV & 1X63MVA-220/20KV) Substation	Kabul	Awfi Bahram Construction	Under Work
12	220kV, Double circuit 54km Transmission line from Arghandi to Connection Point and Butkhak Substation	Kabul	Awfi Bahram Construction	Under Work

No	Project Name	Location	Capacity (MW)	Investor
1	5MW Solar Power Plant	Herat	5	Etemad Solar
2	10MW Solar Power Plant	Khost	10	Biltek
3	40MW Solar Power Plant	Bagrami- Kabul	40	Kabul Melli
4	100MW Solar Power Plant	Kabul	100	Zularistan and Ghazanfar Group
5	40MW Solar Power Plant	Dehdadi-Balkh	40	Zularistan and Ghazanfar Group
	40MW Solar Power Plant	Guzara- Herat	40	Kabul Melli/Regal and Ghazanfar Group
6	40MW Solar Power Plant	Deh Sabz- Kabul	40	Kabul Melli
7	43.2MW Wind Power Plant	Herat	40	77CC
8	100MW Thermal Power Plant	Kabul	50-100	FAJR E MAIHAN/Zwak Power
9	40MW Solar Power Plant	Mohammad Agha-Logar	40	Regal and Ghazanfar Group



**Thank You!**