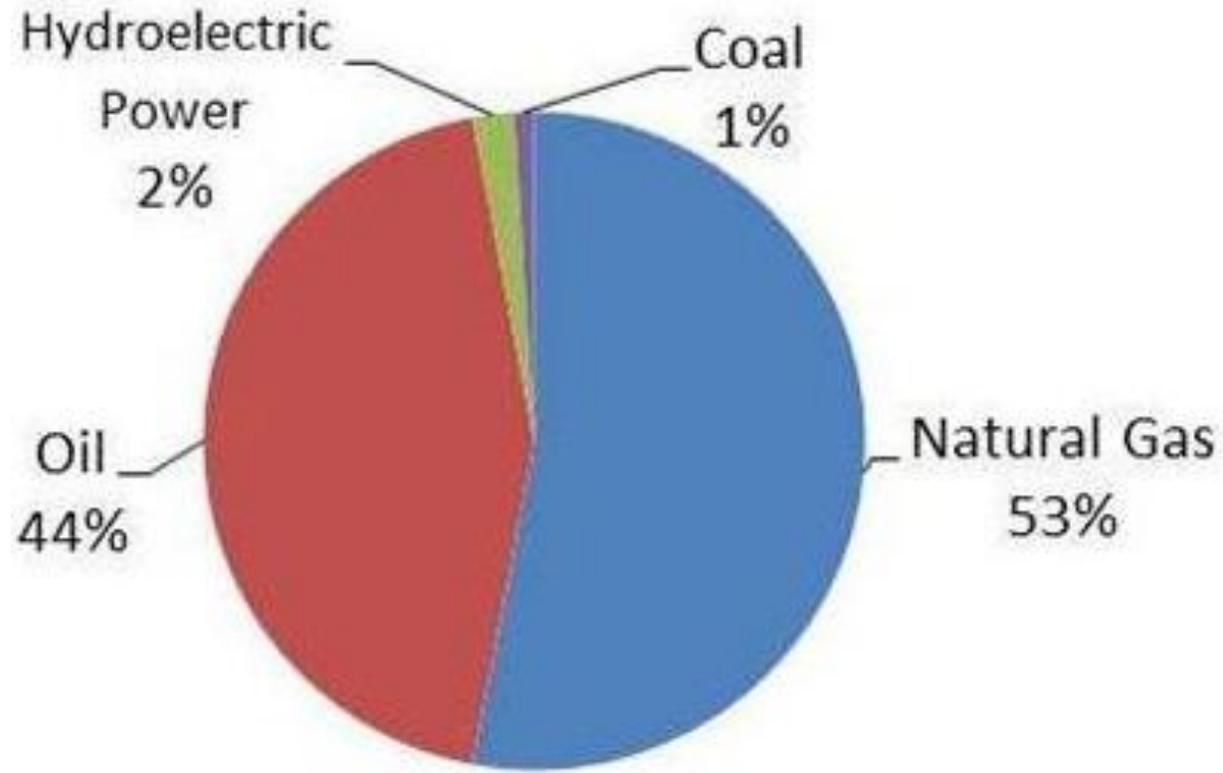


The Renewable Energy situation in Iran



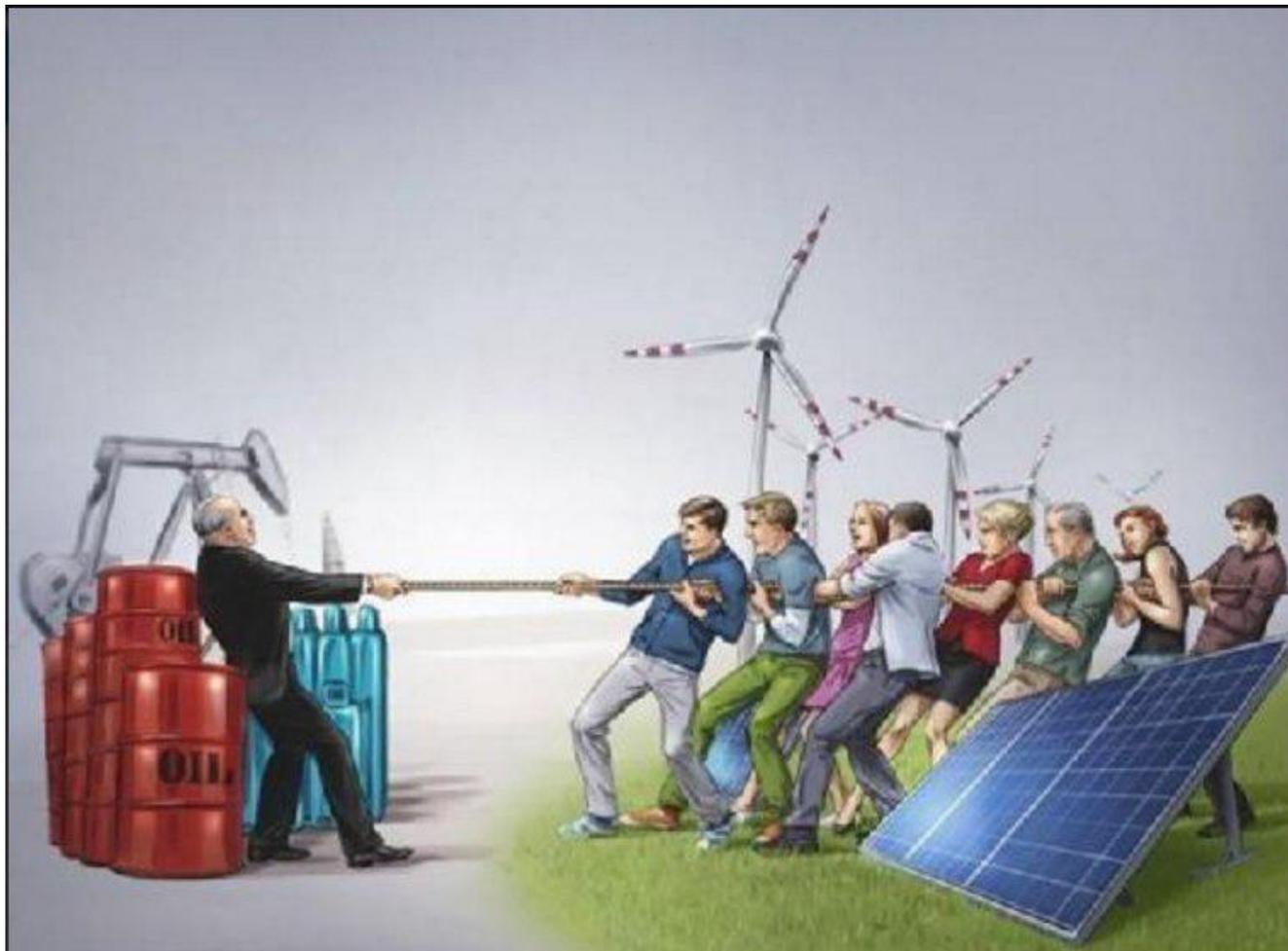


Total Energy Mix in Iran



The use of renewable energy in Iran is still **less than one percent** of the total energy consumption in the country.

Energy production in Iran tends to rotate around the use of **cheap fossil fuels**, and new and renewable energies do not have defensive growth.



According to International Energy Agency, Iran's per-capita energy consumption is 15 times that of Japan and 10 times that of European Union.

Hydropower

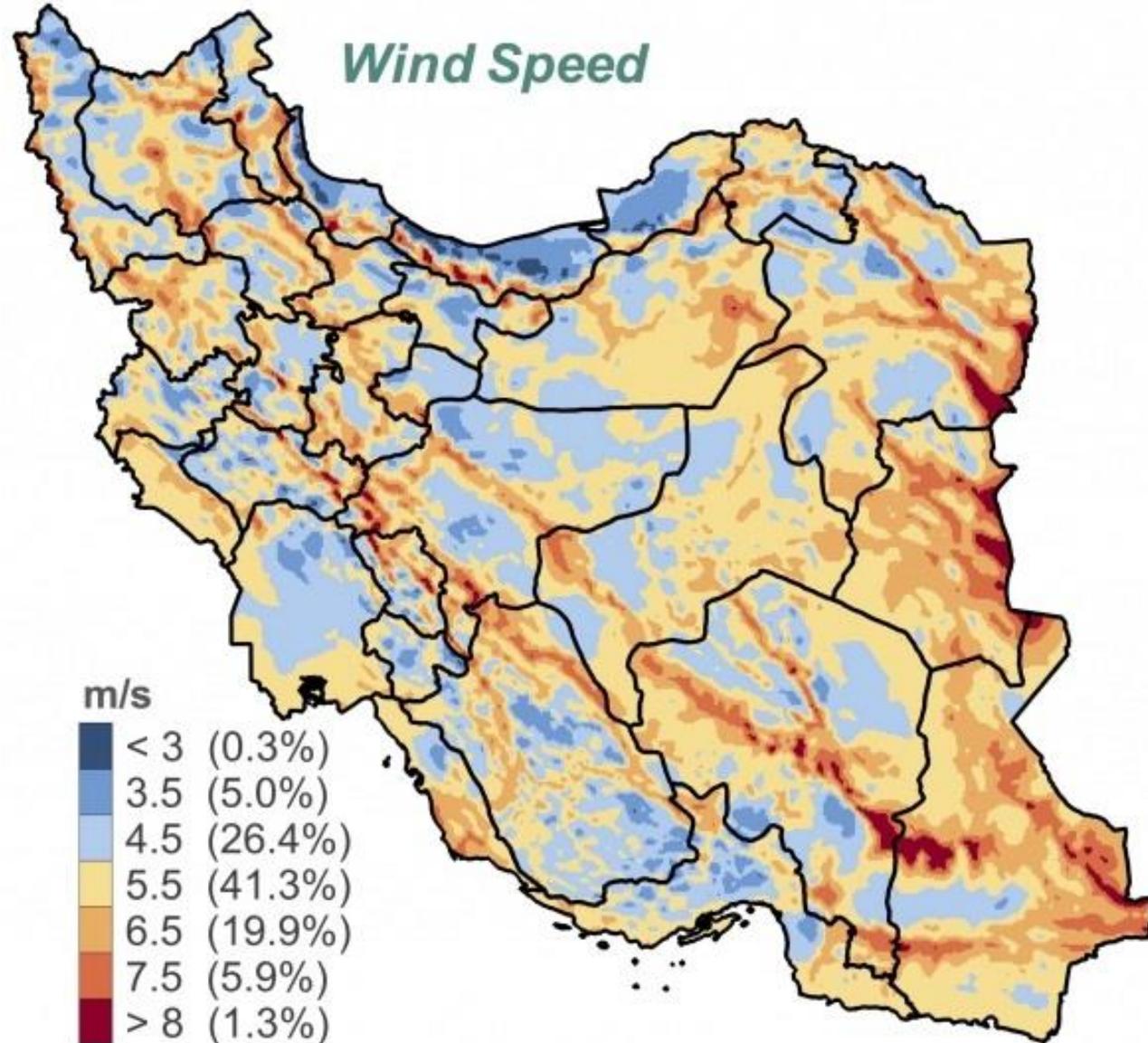


About 17% of the world's electricity is supplied from hydroelectric power.

Since Iran is geographically a dry country, it ranks 38th among the countries of the world in terms of hydroelectricity.

The capacity of the hydropower plants operating in the country reached 9746.1 MW.

Wind Energy



Wind Energy



In Iran, wind energy is the **second largest source** of renewable energy sources.

In Iran, the potential wind-recoverable air in the country is about **100 gigawatts**.

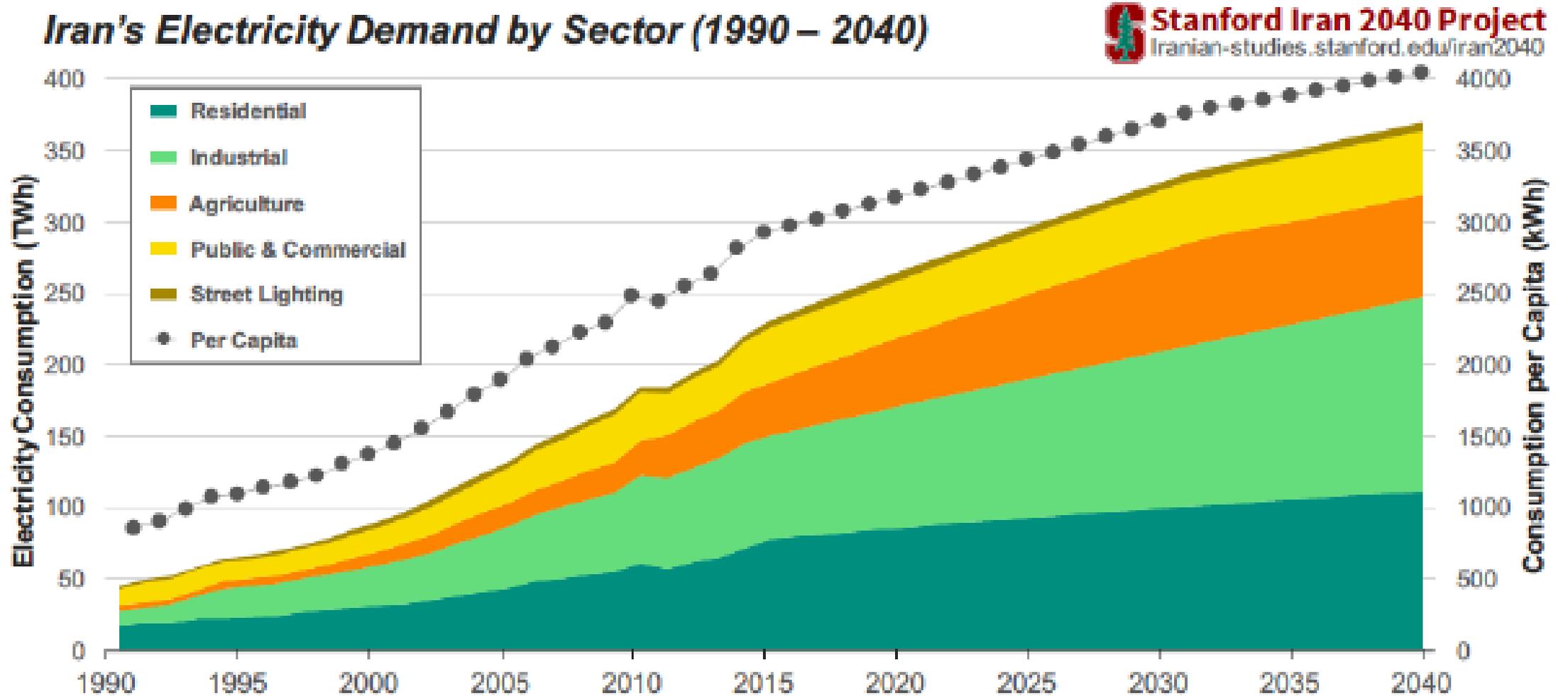
Now, the capacity of the existing power plants is **106.1 MW**.

Geothermal energy



The global potential for using geothermal resources is estimated at **65 to 135 gigawatts**.
Iran has the capability of generating more than **200 megawatts** of geothermal energy.

Iran's Electricity Demand by Sector (1990 - 2040)



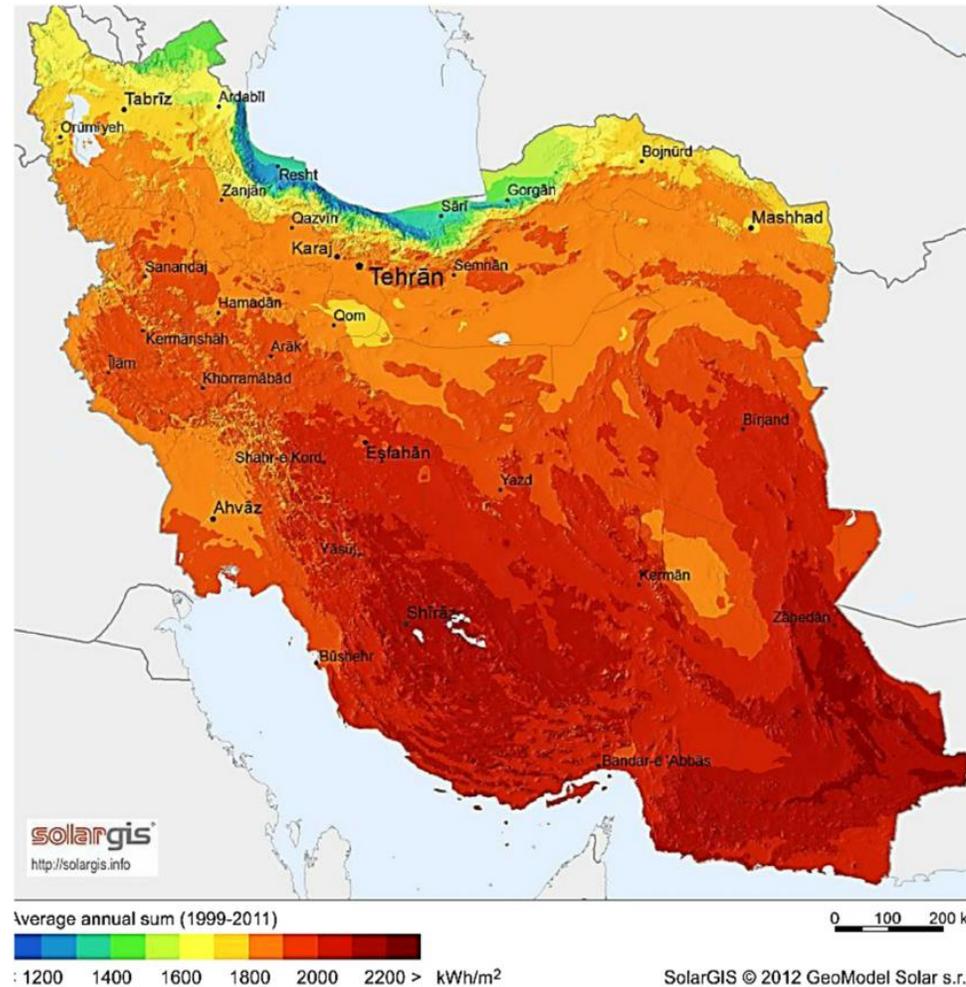
Historical data and projected electricity consumption (1990 - 2040).

Source: Stanford Iran 2040 Project

A Brief on Status and Prospect of Solar Energy in Iran



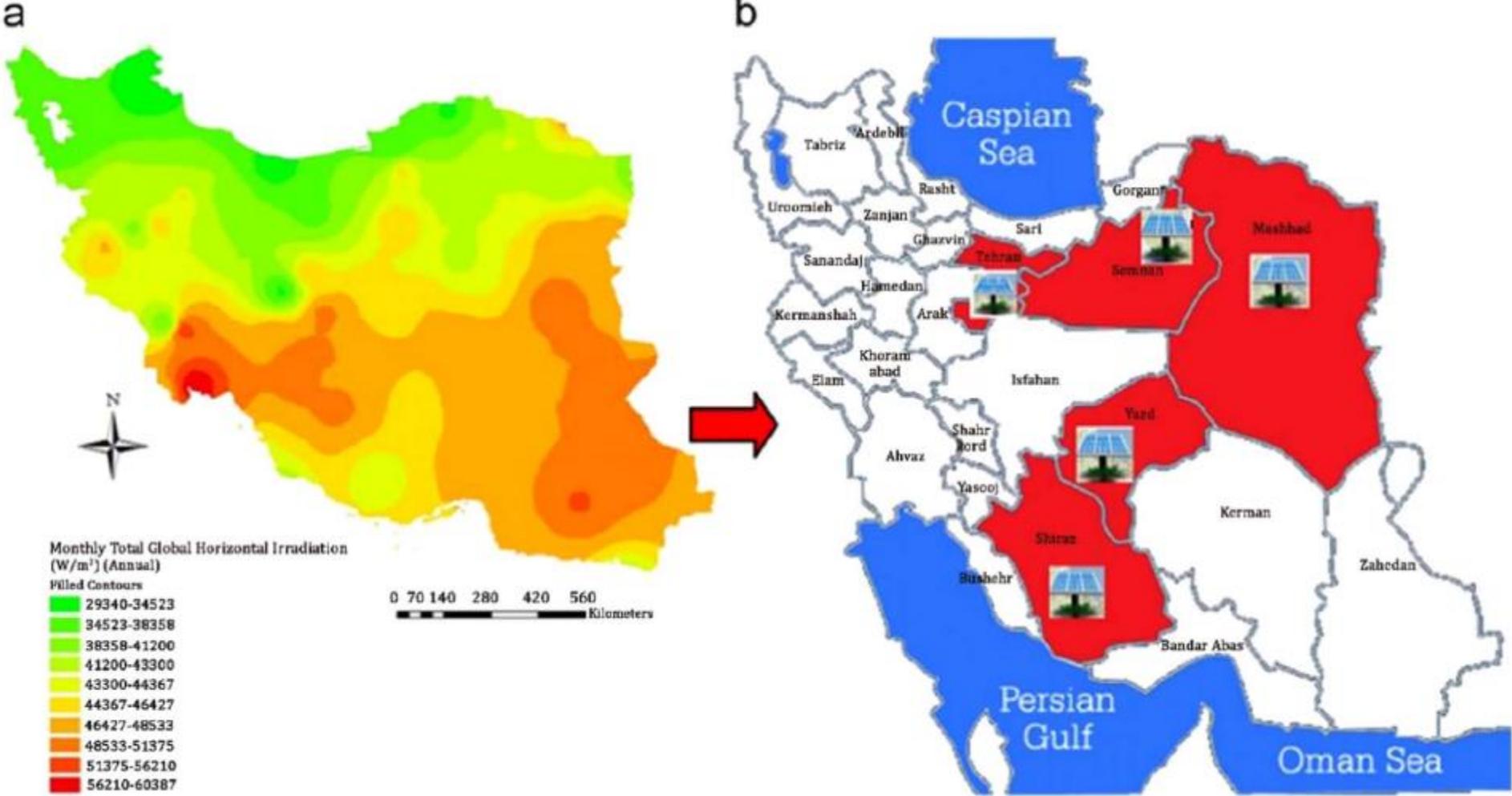
Global horizontal irradiation for Iran



Iran's total area is 1648,196 sq. km, considering only 1% of the total area with 10% system efficiency for solar energy harness, about **9 million MWh** of energy can be obtained in a day.

The average solar radiation in Iran is 4.5 to 5.5 kWh/m², Iran has over **300 sunny days** and an average of **2,800 hours** of sunshine.

Deferent locations of Iran solar assisted powerhouses



On the implementation of the legal obligations of Ministry of Energy, the guaranteed electricity purchase tariff for types of renewable and clean energy

Row	Technology type		Guaranteed electricity purchase tariff (IRRs per kWh)
1	Biomass	landfill	2700
		The anaerobic digestion of manure , sewage and agriculture	3500
		incineration and waste gas storage	3700
2	Wind farm	above 50 megawatt capacity*	3400
		with the capacity of 50 megawatt and less	4200
3	Solar farm	above 30 megawatt capacity*	3200
		with the capacity of 30 megawatt and less	4000
		with the capacity of 10 megawatt and less	4900
4	Geothermal (including excavation and equipment)		4900
5	Waste Recycling in industrial processes		2900
6	Small hydropower (with the capacity of 10 MW and less)	Installation on the rivers and side facility of dams	2100
		Installation on the pipelines	1500

1EUR = 48000 IRR

The guaranteed electricity purchase feed-in tariff

Row	allocated to the consumers and limited to the connection capacity		Guaranteed electricity purchase tariff (IRRs per kWh)
1	Wind with the capacity of 1 megawatt and less		5700
2	Solar	with the capacity of 100 kilowatt and less	7000
		With the capacity of 20 kilowatt and less	8000

Renewable energy projects under development and potential market (2016-2020)

Renewable energy resources	Wind	Photovoltaic	Biomass	Small Hydro	Sea wave power	Total
Under development* (MW)	5662.96	1615.03	194.29	23.5	0.15	7495.93
Share in total planned investment	75.5%	21.5%	2.6%	0.3%	0.0%	100.0%
Estimated demand for renewable systems (MW)	3777.4	1077.3	129.6	15.7	0.1	5000.0

*with at least construction permission, primary agreement or prepared feasibility studies

According to SATBA website, the capacity of installed solar power plants with Non- Governmental sectors up to end of Jan. 2018 is as follow table:

Solar Power Plant

1	Atrian Parsian	0.514 MW	Malard, Tehran	May-14
2	Pak Bana	0.228 MW	Qom	Sep-16
3	Aftab Mad Rah Abrisham	35 MW	Hamadan	Dec-16
4	Tara Moshaver	0.215 MW	Shams Abad, Alborz	Jan-17
5	Ghadir Energy	10 MW	Jarghouyeh, Esfahan	Apr-17
6	Mehran Energy Arvand Co.	1.2 MW	Rafsanjan, Kerman	Jul-17
7	Tose-e Faragir Jask Co.	10 MW	Mahan, Kerman	Jul-17
8	Solar Energy Arka Co.	10 MW	Mahan, Kerman	Jul-17
9	Abouyand Co.	1.313 MW	Damghan	Dec-17
10	Sanaye Siman Shahrekord	1.5 MW	Shahrekord	Dec-17
11	Energy_e_Nou Atieh	10 MW	Yazd	Jan-18
		10 MW	Sistan&Balouchestan, Zahedan	Jan-18
12	Iran Tablou Co.	0.63 MW	Nazar Abad, Albourz	Jan-18
13	Behnad Energy Pars Lian Co.	4 MW	Sarvestan, Fars	Jan-18
14	Pars Ray Energy Bahar Co.	10 MW	Ray, Tehran	Feb-18
15	Aftab Kavir Part	10 MW	Khosef, South Khorasan	Feb-18
Total	114.6 MW			