



11. Infrastructure

11.1 HOUSING & CONSTRUCTION

- As of Sept. 2007, 11.6% of the **employed persons** in the WBGS were working in construction (PCBS, *Labor Force Survey*, July-Sept. 2007).
- Average housing **density** is currently 1.8 persons per room, while the average **number of rooms** per housing unit is 3.3. Highest housing densities are found in northern Gaza and in Jericho (PCBS, *Housing and Housing Conditions Statistics*, 2006).

Number and Area (in 1000 m²) of Licensed Housing Units, 1997-2007

	1997	1999	2003	2006	1 st half 2007
Number of New Licensed Housing Units	13,230	14,587	8,152	6,909	2,757
Area of New Licensed Housing Units	1,768	2,050.6	1,234.2	1,193.6	437.9
Number of Existed Licensed Housing Units	2,759	3,675	1,671	3,301	808
Area of Existed Licensed Housing Units	391.8	439.0	175.8	524.2	135.1

(Source: PCBS, *Construction Statistics/Building Licenses*, 2007; RCs and Jerusalem are excluded.)

- The vast majority of licenses are being issued for the construction of **residential buildings**, and the main **License Issuing Authority** are municipalities, followed by construction authorities and rural authorities.

11.2 TRANSPORTATION & ROADS

- As of Sept. 2007, 5.8% of all **employed** Palestinian were working in the field of transportation, storage, and communications (PCBS, *Labor Force Survey Report Series*, July-Sept. 2007).
- Due to the movement restrictions imposed by Israel's separation barrier and other policies, that have led to the fragmentation of the West Bank, **transportation costs** have increased up to 6-7 times.

■ Vehicles (licensed; excl. Jerusalem)

	West Bank	Gaza	Total
Private cars	36,323	42,372	78,695
Trucks/commercial cars	12,013	10,788	22,801
Public & private buses	950	203	1,153
Taxis	7,342	3,392	10,734
Motorcycles/mopeds	29	219	248
Tractors	615	1,416	2,031
Trailers/Semi-trailers	32	435	467
Others	195	322	517
Total	57,499	59,147	116,646

(Source: PA Ministry of Transport, 2006.)

■ Roads (excl. bypass roads)

	West Bank	Gaza	Total
Area of main roads (km ²)	35.1	11.9	47
Area of district roads (km ²)	17.5	5.9	23.4
Area of local & access roads (km ²)	60.8	22.3	83.1
Total Area (km²)	113.4	40.1	153.5
Length of main roads (km)	699.1	237	936.1
Length of district roads (km)	586.7	195	781.7
Length of local & access roads (km)	3,036.2	1,113.8	4,190.0
Length of bypass roads (km)	973.7		973.7
Total Length (km)	5,294.7	1,545.8	6,840.5

(Source: PCBS, *Land Use Statistics*, 2005.)

11.3 COMMUNICATIONS

- Under Art. 36, Oslo II, the PA is permitted to "build and operate separate and independent communications systems and infrastructures." The current WBSG connection system is almost entirely dependent on Israeli infrastructure. The responsibility for the provision of lines and services to eventually disengage from the Israeli network lies with the **Paltel** (Palestinian Telecommunications Co.), a public shareholding company in which the PA has a 10% stake. Paltel has over 346.124 **fixed lines** (Paltel, as of Oct. 2007).
- On 21 June 1999, the regained international dialing code - **970** - for the WBGS was officially launched as was the first Palestinian cellular telephone service, known as '**Al-Jawwal**' (**subscribers** as of Dec. 2007: 1,002,823).
- As of Sept. 2007, 5.8% of all **employed** Palestinian were working in the field of communications, transportation, and storage (PCBS, *Labor Force Survey Report Series*, July-Sept. 2007).

11.4 ELECTRICITY & ENERGY

■ Overview:

- Total **energy consumption** in West Bank and Gaza is small by regional standards, let alone international standards.
- **Energy demand** continues to grow quite rapidly; most (75%) is accounted for by the service and household sectors, since there is relatively little activity in manufacturing.
- West Bank and Gaza have different **energy supply** options.
- Nearly all energy is provided by **electricity** and **petroleum** products, most of which has been purchased from Israel (some diversification is beginning to develop).
- The only substantial **domestic energy resource** is the gas field discovered offshore Gaza, which awaits development.
- The West Bank depends almost entirely on the Israeli Electricity Co. (IEC) for **electricity supply** since it has no generation capacity or transmission network. The **electricity system** in the West Bank consists of numerous isolated distribution systems to which power is supplied to by four utilities - Jerusalem District Electricity Company (JDECO), Hebron Electric Power Co. (HEPCO), Southern Electric Co. (SELCO), and Northern Electricity Distribution Co. (NEDCO).
- The maximum **capacity of electricity supply** to the West Bank is about 550MVA, 30% directly by IEC which supplies electricity in bulk to 215 localities, and 70% indirectly by IEC through JDECO which supplies electricity to East Jerusalem and in bulk to 165 localities.



- **West Bank electricity consumption**– as measured by purchases of bulk power from IEC - increased at an average annual rate of 6.4% between 1999 and 2005.
 - **Gaza** receives **electricity** from IEC and from a gasoil (diesel) based power plant with electricity generating capacity of some 140MW located inside Gaza, which is the only major power-generating facility in the WBGS. Gaza also receives a small power supply from Egypt
 - In Gaza, **fuel** is supplied to a fuel terminal at Nahal Oz on the border with Israel and in the West Bank, to the terminals in Nilin (for LPG) and Deir Kadiz (other fuel types) from where it is distributed through the Palestinian Petroleum Commission (PPC). Since here is no **storage capacity** for petroleum products in the WBGS (though plans are being prepared) fuel is transferred on a day-to-day basis.
 - According to the Paris Agreement, the Palestinians are allowed to **sell fuel** in the WBGS at a lower **price** than the price in Israel, at a rate which does not exceed 15% of excise tax on gasoline. Israel collects the **taxes** on the fuel for the Palestinians. The **total revenue** from fuel excises in 2005 was equivalent to US\$180 million.
 - **Total revenues** from fuel excise duties and VAT on energy consumption amounted to about US\$330 million in 2005, equivalent to one third of total fiscal revenues.
 - In 2000 large **gas resources** (about 35 bcm) were discovered in the Gaza Marine field, 36 km offshore Gaza, by British Gas (BG) and partners (the Palestinian Investment Fund and CCC – a Greek/Lebanese infrastructure company). By the end of 2006 BG (as operator) was negotiating to sell up to 2bcm/year to Israel via a sub-sea development and pipeline to a terminal at Ashkelon. Gas is expected to play an important role in the future due to its low cost.
- (Source: World Bank, *West Bank and Gaza Energy Sector Review*, May 2007)

■ **Facts:**



- Some 99.2% of Palestinian households are connected to a **public electricity network**, while 0.5 % have private generators and 0.3% have no electricity. Most unconnected households are located in the southern West Bank. (PCBS, *Housing and Housing Conditions Statistics*, 2006).
- LPG (Liquefied Petroleum Gas) is the **main fuel** used to **cook** (96.1%) and **heat**, while solar energy is the main source for **water heating** (67.6%). (PCBS, *Household Energy Surveys*, 2006).
- In **2006**, the average household consumption of electricity was 227 kw/h, of LPG 17 kg and of kerosene 4 liter. (PCBS, *Household Energy Survey*, 2005).
- The **Gaza Strip** is supplied with electricity from three main sources:
 1. The Israel Electricity Corp. provides 120 MW to north and central Gaza (about 60% of the electrical supply to Gaza);
 2. The Gaza Power Plant provides 60 MW to the southern area (but relies on fuel supplied by Israeli firms); and
 3. Egypt provides 17 MW to the Rafah area.

The **Palestinian Energy Authority** manages the current shortage of at least 40 MW (due to the Israeli bombing of the Gaza Power Plant in June 2006) by implementing a rotational electricity supply to the different parts of the Strip. Despite the humanitarian crisis caused by the shortage, Israel decided on 19 Sept. 2007 to further disrupt and/or reduce the supply of **electricity and fuel** - in harsh violation of international law - as a purported "response" to the firing of Qassam rockets. (PLO NAD, *Fuelling the Fire: Cutting off Gaza's Electricity and Fuel*, Sept. 2007)

Recommended Research Sources:

http://www.pcbs.gov.ps/ (see under Economics and Area Statistics)	http://www.najah.edu/english/Centers/RERC.asp
http://www.perc.ps/ (Palestinian Energy & Environment Research Center)	http://www.paltel.net/
http://www.menr.org/ (Ministry of Energy and Natural Resources)	http://pea-pal.tripod.com/ (Pal. Energy Authority)
http://siteresources.worldbank.org/INTWESTBANKGAZA/Resources/294264-1166525851073/EnergySectorReviewMay07.pdf	

Makhool, Basim & Nasr Atynai. *The Role of the Construction and Housing Sector in Palestinian Economic Development*. MAS, 2002.
Mody, Ashoka. *Infrastructure in the West Bank and Gaza Strip: Institutions and Growth*. Ramallah: MAS, 1996.
World Bank. *West Bank and Gaza Energy Sector Review*, May 2007.

