A view in the utility industry its influences and dependants

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Introduction

The utility industry plays an important role in Curaçao's development as a country. Water and electricity are vital for human sustenance, health and dignity and in addition to economic opportunity. Affordable and reliable energy is essential for household productivity and the development of most industries, from agriculture to horeca to finance to health care to communications.

While the utility industry, in a broad context, can include engineering, infrastructure, natural gas distribution, and even telecommunications, this reports focal point is on water and electricity in Curaçao. Within the water and electricity sectors, the report focuses on production development, price and inflation of the past seven years. And in turn observe if it has an influence on the local economy. In this article figures will be given that show that water and electricity plays a central role in our development. In 2011 our population consisted of 145,406 persons who depended on this valuable liquid and energy.

The local utility company

It is important to note that the utility company in Curaçao is a publicly owned company. A utility company is a company that, often from a monopolistic position, operates in a sector which is considered to be of public use due to its importance in providing products or services that are in the general interest. The common shares of the local company are concentrated in a holding and are fully owned by the government of Curaçao. Curacao's utility company is responsible for the production and distribution of power and water as well as the delivery of accompanying services. It is depended on world oil for local production. It services approximately 69,000 households and companies through 130,000 electric and water meters.

Production

The production unit is responsible for the production of drinking water and electric energy. Drinking water is produced by seawater desalination processes of evaporation or reverse osmosis and is produced by plants located at Mundu Nobo.

Electric energy is produced by steam and gas turbines at Mundo Nobo, diesel units at Dokweg and ISLA, and also a small portion of energy is produced via wind mills located at Tera Kora and Playa Kanoa. The produced water and electricity is supplied to the Distribution section, which in turn supplies the customers.

Distribution

The distribution unit is in charge of that all households and companies in Curaçao are supplied with water and electricity. The unit is also responsible for the setup and maintenance of an effective Water and Electrical distribution grid with a guaranteed reliability rate, meeting international standards. The Electrical, Water, Engineering, Procurement and Business Improvement Engineering departments each contribute to meet this responsibility[1].

[1] For an extensive description of the production plants please review the Aqualectra Production & Distribution document on their website.

Utility industry in economic development

The utility industry's core is along with their profit-making business activities and the multiplier effects they create aims to provide safe, affordable water, sanitation and electricity. It is the most valuable product to enable human and economic development.

Having water, sanitation and electricity enables an individual's talent and capabilities in the education process. Lack of these basic necessities contributes to school vacancies, poor health, and underperformance on cognitive tests. These dynamics constrain economic choices and greatly contribute to adult poverty (UNDP 2006, p.6).
Economic development benefits for water and energy productivity can come from improved health and education and, more use technological developments.

Production developments in the utility industry 2005-2011

Electricity

The new world demands high energy capacity due to technological advances. The selection of electricity production modes and their economic viability varies in accordance with demand and region. The production of electricity in 2005 was 848,561 kWh; in 2011 this was about 902,239 kWh. This means a growth of about 6.3 percent over seven years.
When observing (table 1 the production of electricity per quarter, there is no trend. The data fluctuates and varies from quarter to quarter and year to year. It all depends on the demand.

In 2006 the production of electricity was negative for three consecutive quarters (see table 1). In 2007 and 2009 we see a positive development through out the whole year. In 2011 it is observed that in the first two quarters there is a lag in production of respectively 2.9 and 0.5 percent, while in the last two quarters it has grown to its highest peak ever over the last 6 years (10 % and 11%).

Table 1: Quarterly Electricity production changes

% Electricity	2005	2006	2007	2008	2009	2010	2011
Q 1	-5.4	-3.3	3.4	-1.2	1.0	9.1	-2.9
Q 2	2.1	-3.4	2.0	-7.7	8.8	5.3	-0.5
Q 3	2.6	-2.3	0.4	2.0	3.4	-5.9	10.5
Q 4	-0.3	3.0	5.2	-3.9	6.0	-9.6	10.7

Water

Water is a natural resource, but also a commodity, much like oil, minerals, and timber. It costs money to extract, treat, process, and distribute; it has value as an economic input and as a facilitator or accelerant of economic activity. Studies[2] have illustrated that dependable water supplies contribute to GDP growth, and that lack of water contributes to economic stagnation and decline. For Curaçao water is likewise an important component for economic development.

[2] Water as key to economic development. Copyright © 2012 World Savvy Monitor. All Rights Reserved.

It is used by all industries practically. In 2005, 13005 m3 (cubic meter) of water was produced and in 2011 14398 m3. This is a growth of about 11 percent.

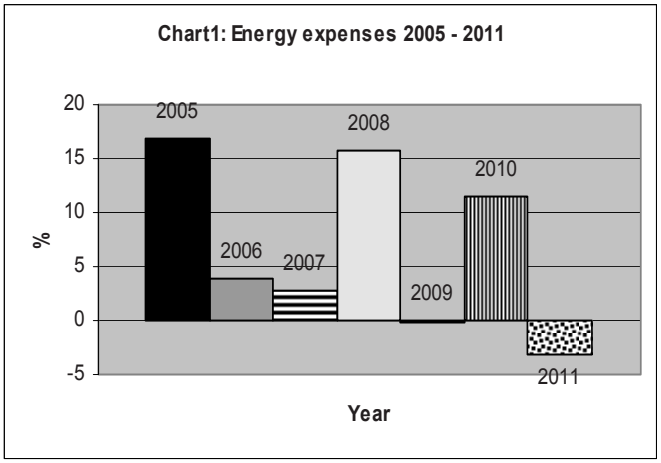
If a comparison is done by quarters in a year (see table 2), it is seen that there has been a negative production in 2005, it continued on to the third quarter of 2006. 2010 is also a noticeable year for water production. There has been a negative development for the last 3 quarters of 2010 (-5.5, -9.4, -1.2 %), this may be due to the low consumption of water as a consequence to the immense rainfall in 2010, it was average 963 mm, in 2011 about 628 mm The average rainfall precipitation in 2005 was 842mm. (see CBS statistical orientation).

Table 2: Quarterly Water production changes

% Water	2005	2006	2007	2008	2009	2010	2011
Q 1	-6,8	-4,6	5,1	0,8	2,0	2,2	2,1
Q 2	-4.6	-3.0	7.9	-4.5	7.7	-5.5	3.8
Q 3	-8.6	-2.3	6.0	-2.4	9.1	-9.4	12.1
Q 4	-14.5	12.5	0.6	4.5	3.3	-1.2	0.7

Local utility price developments and world oil prices

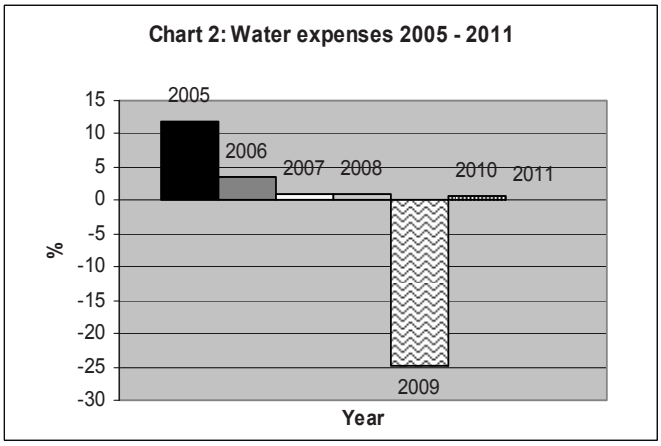
Price of energy consumption expenses



The price of energy consumption expenses in Curaçao has been fluctuating for the last years. This is due to the high dependence on oil products in producing electricity, and as is known oil prices have been volatile these past years. (see paragraph on world oil prices)

In chart 1 it is viewed that the highest peak in inflation on energy expenses was about 17% in 2005 and the lowest in 2011 where expenses dropped with 3 percent. This category automatically has an influence on other consumer products on the island.

Prices of water consumption expenses



Water is one of the basic necessities of human existence, which can possibly explain the low fluctuations in this category. Chart 2 shows the price developments on water consumption cost which has been quite leveled with the exception of 2009 where the price has dropped sharp with 24.9 percent. In 2011 the price developments has been nil compared to 2010 (0.8%).

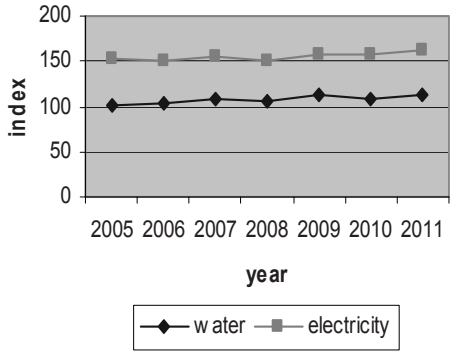
Not always an increase in production is parallel to an increase or decrease in prices. Sometimes there is an increase in production but a decrease in prices. For example water and energy production increased in 2009 (table 3: the electricity and water production has shown an increase with respectively 6 index points and 7 index points), but prices decreased in 2009 (chart 1 and 2).

In 2007 there was an increase in production and decrease in prices. It is also viewed that inflation on water and electricity prices up to 2007 has been parallel to each other. The prices show that they are dependent on the international oil prices. From 2008 local policy was in effect to absorb the cost of high oil prices, this intervention on prices had a delayed effect on the consumption expenses. Prices for electricity show a decrease of 3 percent in 2011 and in 2010 an increase of 11 percent.

Table 3: Utility production indices

	Water production	Electricity production
	1000 m^3	kWh
2005	102	153
2006	102	151
2007	108	155
2008	107	151
2009	113	158
2010	109	157
2011	113	163

Graph 1: Utility production

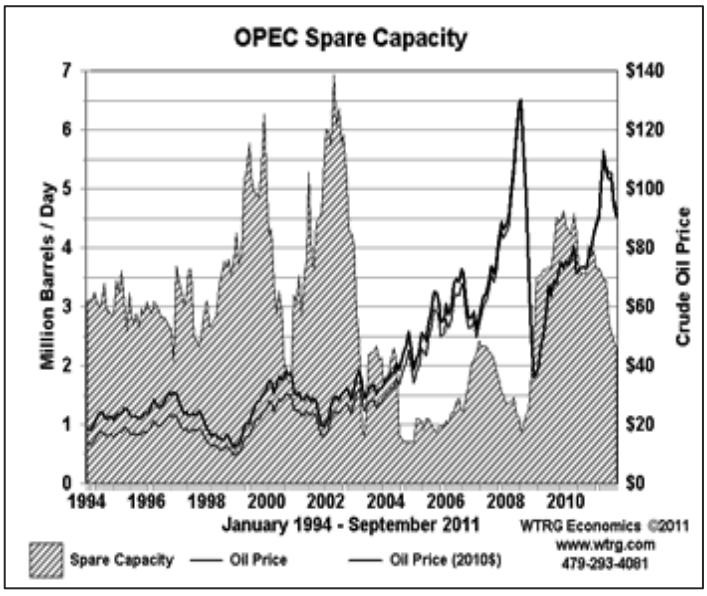


Developments in world oil prices

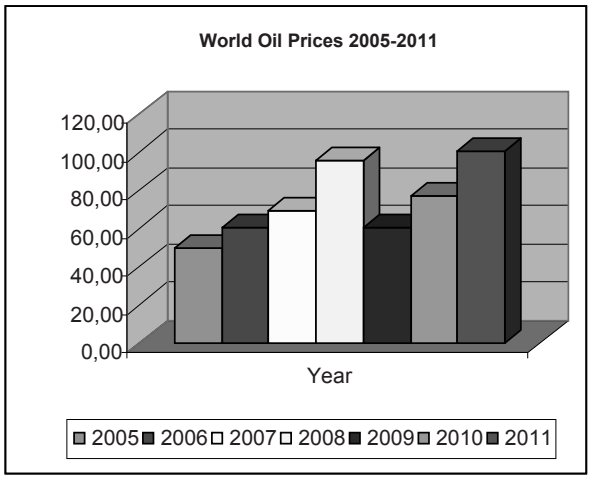
Internationally there has been a steady growth in oil prices between 2005 and 2011, with the exception of 2009. The loss of production capacity in Iraq and Venezuela combined with increased OPEC production to meet growing international demand led to the erosion of excess oil production capacity. In mid 2002, there were more than six million barrels per day of excess production capacity and by mid-2003 the excess was below two million. (OPEC Chart)

The world consumes more than 80 million barrels per day of petroleum products this added a significant risk premium to crude oil price and was largely responsible for excess prices of $40-$50 per barrel.

Other major factors contributing to higher prices included a weak dollar and the rapid growth in Asian economies and their petroleum consumption. The 2005 hurricanes and U.S. refinery problems associated with the conversion from MTBE (Methyl Tert-Butyl Ether) to ethanol as a gasoline additive also contributed to higher prices.



In 2008, after the beginning of the longest U.S. recession since the Great Depression the oil price continued to soar. In the face of recession and falling petroleum demand the price fell throughout the remainder of the year to the below $40 in December..



Following an OPEC cut of 4.2 million barrels per day in January 2009 prices rose steadily in the supported by rising demand in Asia.

All these world developments in oil have probably had an influence on our local economy. Curaçao has an open economy that is dependent on international economic developments. The local production of water and electricity is dependent on oil products to operate the machineries of the industry. And due to the high cost of production it is reflected in the prices.

Summary

This article presents different situations regarding utility and economy. The utility production mostly envelops the demand for water and energy. This production has a cost and it is being paid by the consumers. The price development in this industry is related to world oil prices and it certainly influences our local prices. Without water and energy there is no viable economic development because most economic activities depend on it. Utility is an interdependent product that relies on local and international factors. Optimum course of action regarding utility should be taken into account when making decisions.