



# ***TOTAL WATER SOLUTIONS CC***

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## **INTEGRATED INFRASTRUCTURE PLATFORMS**



Electric Power – Water – Sewage Treatment – Cellular Phone

### **A Complete Economic Development Package**

- Four infrastructure elements in one unit
- Prefabricated for rapid assembly and connection
- Barge or skid mounted
- Modular for quick installation
- Lower installed costs than larger facilities
- Sized to fit communities of over 1,000 residents
- Ideal for free trade zones, resorts & industrial parks



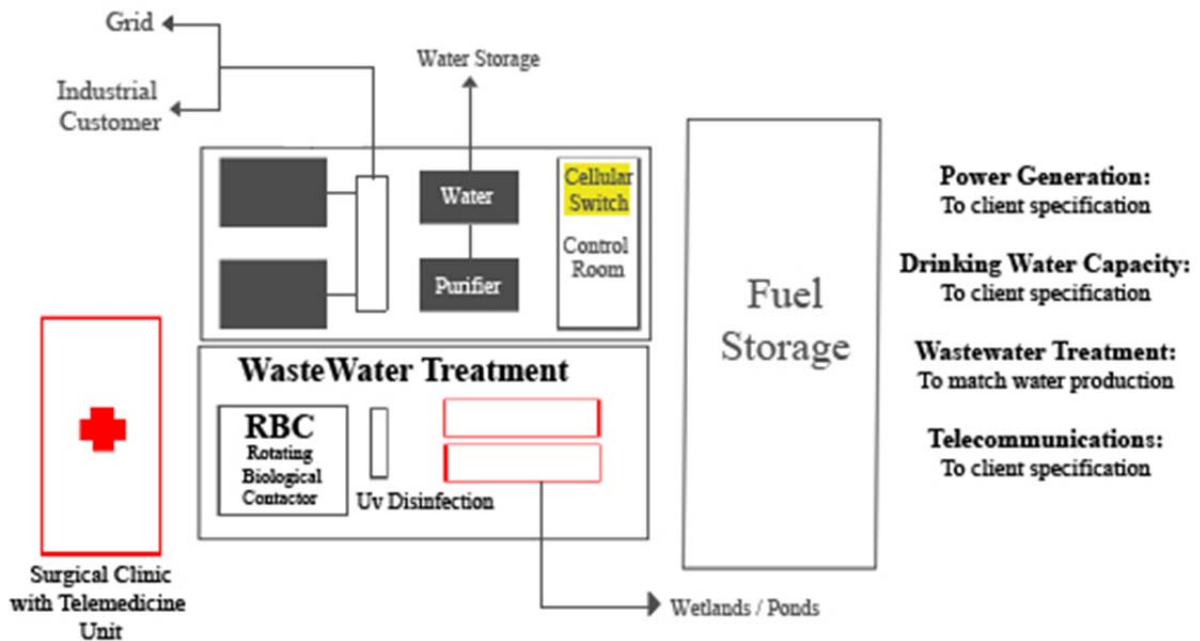
## Description

Infrastructure platforms are for international sale and can be used to serve as the core for economic development in small and medium sized communities, Free Trade Zones, industrial parks and resort communities. A platform Includes power generation, drinking water, telecommunications and waste treatment capabilities in one package prefabricated for quick delivery and assembly. The platforms are also modular to allow for addition of new capacity as the community's economy grows.

The platforms are manufactured by Total Water Solutions. The components are proven, reliable technologies engineered for minimum environmental impact.



## Typical Layout



### Specifications\*

\*Platforms are constructed in a variety of configurations. Any and all configurations are possible.

#### Electric Power

- Diesel generators
- Battery start capability
- Operation in frequency or parallel control
- Protective relays and switching

#### Water

- Water purification units (WPU) designed according to source water quality.
- Possible to-connect with waste system

#### Waste Treatment

- Method of waste treatment and disposal based on site ground and water table
- Sized equivalently for water production capacity from WPU's
- Methane recovery unit possible

#### Telecommunication

- Digital GSM cellular system
- Data links for platform performance monitoring
- Internet links for school and medical use



## **Shared Systems**

Platform may be barge mounted w/ internal fuel and water storage tanks or skid mounted w/ external tanks, includes integral fire protection system and control room. School and Clinic units are also available.

## **Equipment Options**

### **For all platform sizes and considerations**

- Power and water distribution systems
- Extra fuel storage
- Maintenance service
- Hospital and clinic facility
- Maintenance crane
- Site security systems
- Full economic development program

## **Sales Service**

Infrastructure platforms are normally sold on a turnkey basis with Build lease transfer options and other options are also possible, the following services are part of the purchase price:

- Development assessment and proposal
- Interface proposal for existing systems
- Environmental assessment
- Site survey and preparation
- Interface construction
- Platform delivery and hook-up
- Platform testing
- Operating training and turnover



## The decentralized infrastructure approach

Decentralized infrastructure development focuses on community-level facilities and private sector ownership of infrastructure functions for municipal or industrial use. In addition to providing power, water, waste and communications services, the decentralized approach can serve as a foundation for programs to foster economic growth in small and medium sized communities.

The decentralized approach is best suited to municipalities of 1000 to 100,000 inhabitants. Municipalities of this size are the backbone of any nation. In many countries, however, they generally receive infrastructure level of economic development.

Decentralized infrastructure facilities offer a supplement to larger, central installations, not a replacement for them. When included in a well-balanced, national economic and environmental strategy, decentralized facilities offer substantial benefits to the entire country, not just the host community:

- A platform can provide four infrastructure elements simultaneously, not sequentially over several years. In many communities, potable water and sewage treatment are often the last services provided. Yet they have the largest direct effect on health, life expectancies and infant mortality.
- Platforms are highly visible and can be placed in operation in a very short time typically less than two months from delivery. This creates in important energy for the community, which sees the platform as a sign of its political importance.
- Communities with appal, reliable infrastructure serve as “**migration** “ to attract people and discourage migration to over crowded metropolitan centres
- Decentralised infrastructure facilities require significantly **less initial investment** then large, centralised ones. They can be privately financed and locally owned, allowing more of the revenue stream to remain within the local economy, rather than repatriated by foreign owners and investors.
- Reliable infrastructure is a key to **attracting additional investment** to a community. Its availability creates jobs, industrial and consumer demand and economic growth.
- Decentralisation offers substantial **reliability for local infrastructure service**.
- **Rural electrification programs** are usually implanted via distribution systems that radiate from nodes on electrical transmission networks. An operating platform automatically becomes a reliable node, whether connected to a national network or not, thus permitting acceleration of rural electrification programs for smaller rural communities in the vicinity.
- A platform is an investment that **can benefit several communities**. Platforms are designed for “leapfrogging”. A platform has served its purpose when it initiates the spiral of economic growth in a community (typically in less than five years). This growth increases local industrial and consumer demand, necessitating instillation of larger, permanently based generating and treatment facilities. Once larger units are in operation, the platform can be removed, refurbished and placed into operation at another location to begin the process anew.



## **Financing Options**

To suit application

## **Company Information**

Total Water Solutions (TWS) engineers, designs and supplies systems, equipment and services to treat industrial and potable water supply, and industrial and domestic wastewater streams. Our process technology covers a vast spectrum of applications from the most common to the highly complex. TWS is committed to empowerment and training and looks forward to further contributing towards the growth and development of our country, provinces and cities, and is proud to be associated with the successful emergence of the New South Africa. TWS was formed into a CC in 1999 and the members have a combined experience of over sixty years in their respective disciplines. The technology we are offering is the result of many years of research and development carried out by TWS and is supplemented by numerous specialists co-operating in the field of water treatment and alternative power systems

We develop and implement systems and services that provide our customers with cost effective and reliable solutions; plant and equipment. We strive for continuous open communication with our clients. We are committed to customer care and service excellence. We are committed to further research and development as a policy for continued improvement and to remain ahead with developments in our field.