



**Water Powered  
Technologies**  
*We are Water!*



# **‘Water As A Service’**

*Introduction to large scale Venturo system*

*Obviam Spring 2019*

# Why is a Venturo pump system different?

**There is no other water pump that can pump water on such a large scale-using no external energy source**

- Venturo can pump up to 18,000 liters per minute over 50 kilometers (depending on vertical height!)
- Does not use any electrical or diesel energy sources
- Venturos only 'power source' is flowing water from river, stream or dam outflow

# Why is a Venturo Different?

**The Venturo is the best large volume water transfer solution**

- No need for pump refueling, generators or live cables
- Maintenance costs are almost zero
- Patented and tested over 8 years with working sites operational



See the Venturo working  
<https://vimeo.com/240511433>



# Which competitors are there for WPT's Venturo?



**WPT won a 'zero carbon' pumping competition held by the UK Government in 2012 for its new large Venturo pump design.**

**This global competition confirmed there were and still are no other pumping technologies which could transfer very large volumes of water without requiring external power sources, work 24/7 and need minimal maintenance.**



Solar powered pumping technology is very effective for low volume pumping to low vertical heights where technology prices have really come down allowing mass adoption by small holders (albeit financed by global NGOs)

However, for high volumes of water now required to be moved from wetter regions over long distances to areas in drought, eg; for human consumption in expanding cities, agriculture or hydropower and industry- the only option is still the Venturo.



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# Sustainable 'Water As A Service' Solution

WPT does not want to sell Venturo systems but lease them to Water Utilities, Plantations and Mines who all need large scale water transfer service without such high energy costs

Together with a selected Equity Partner, WPT will survey first demo client sites, install & operate Venturo system

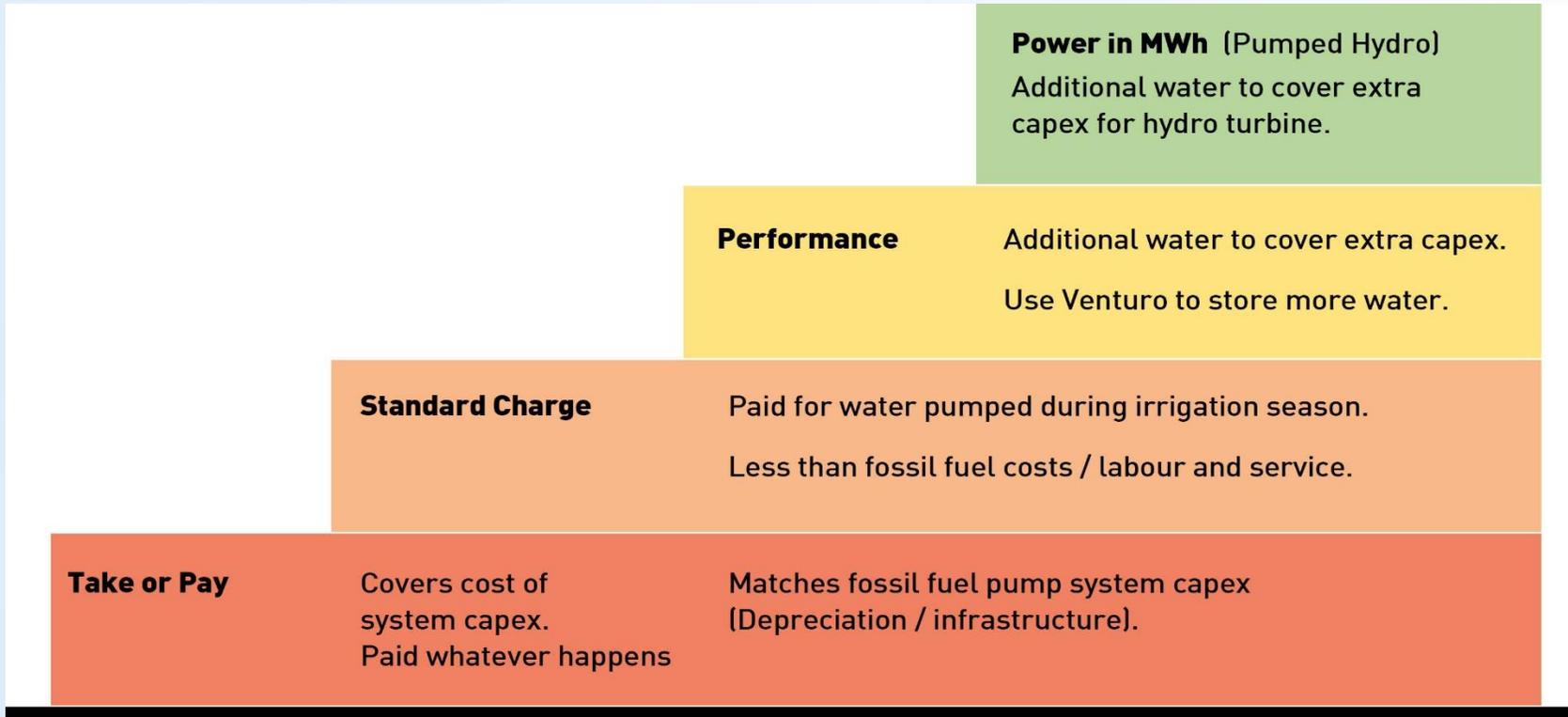
WPT/ Partner agree long term customer 'Water As A Service' fee based on capex required for WPT's system

WPT/ Partner arrange finance so client pays less upfront

# How does the Funder benefit?

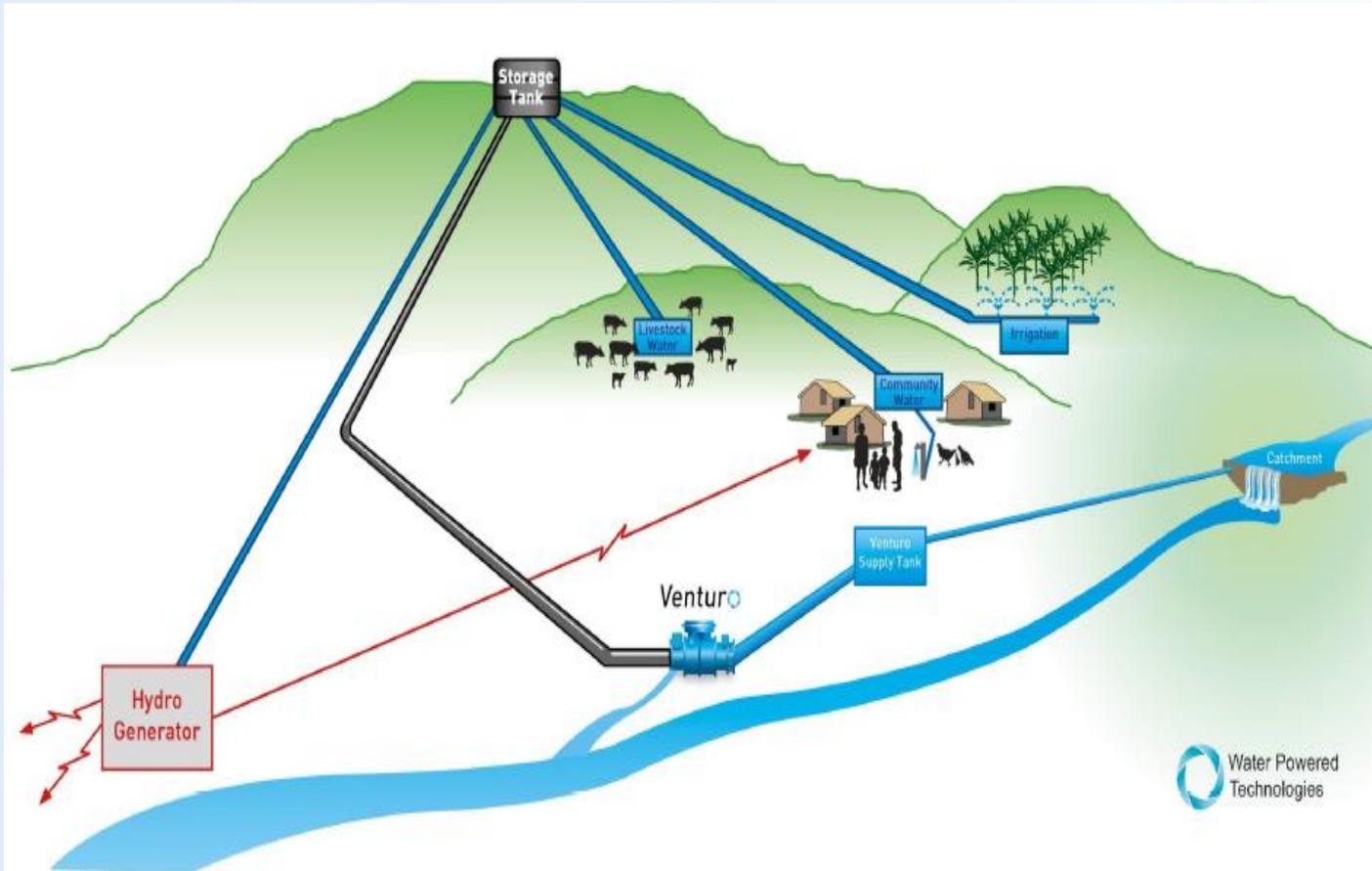
Venturo system is installed with no upfront charge

‘Water as a Service’ fee based on service level bandings.



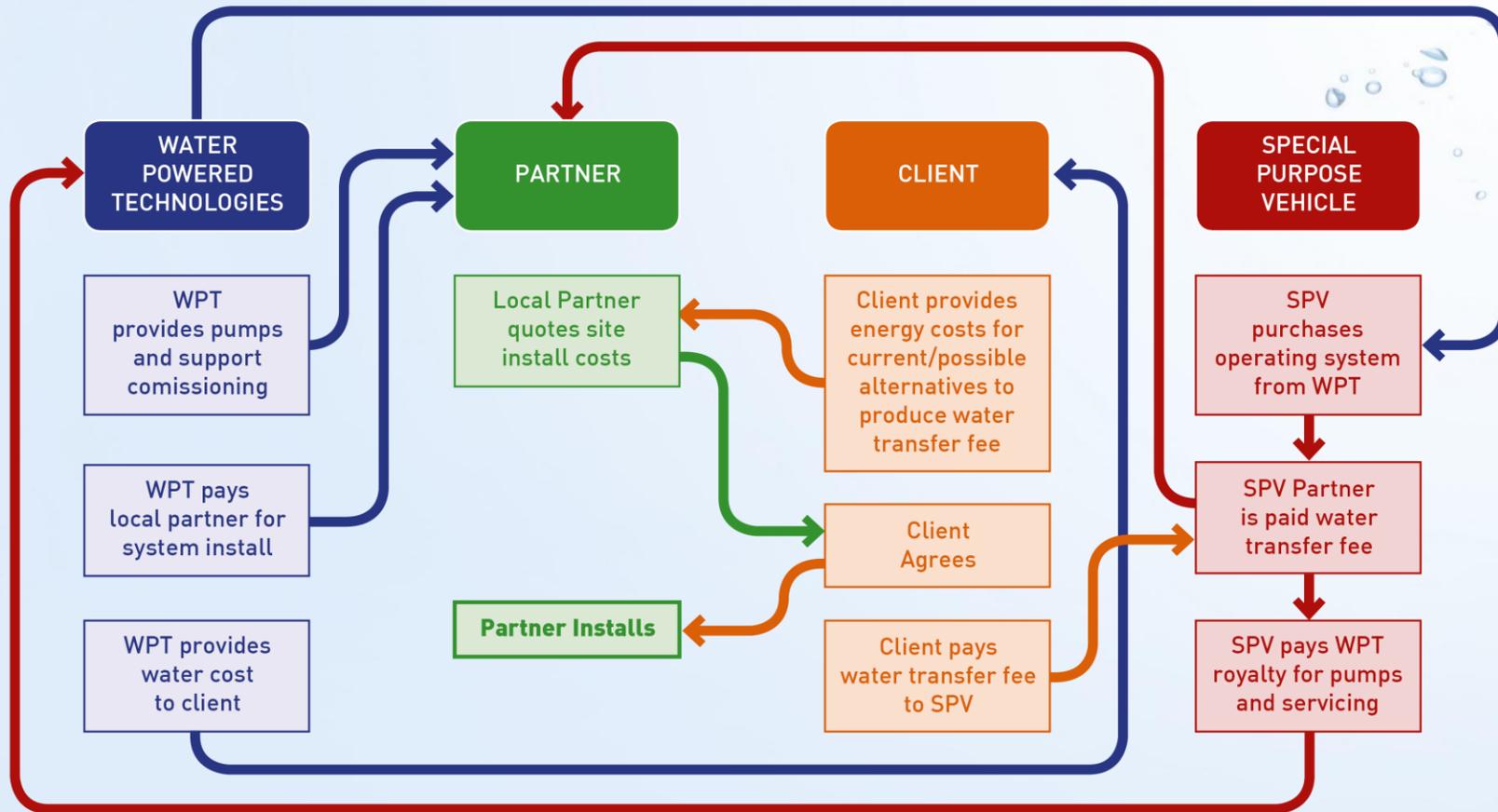
*NB; Each Customer pays a different ‘**water transfer fee**’ based on; 1) capex required. 2) energy costs of existing water pumping system in place. 3) upside irrigation offers to plant yields. 4) hydro power generated*

# How does the Funder benefit?



- ‘Shared Savings’ with customer vs their current pumping costs
- Water ‘Off-Take’ revenue for Agriculture
- Pumped Hydro Power revenue

# How 'Water As A Service' works



WPT will install and manage the first sites itself.

After a few have been installed, local M&E partners will install and operate future Venturo systems during 'roll out'.

'Sustainable Infrastructure' Funder to equity fund first few sites, then debt fund through SPV.



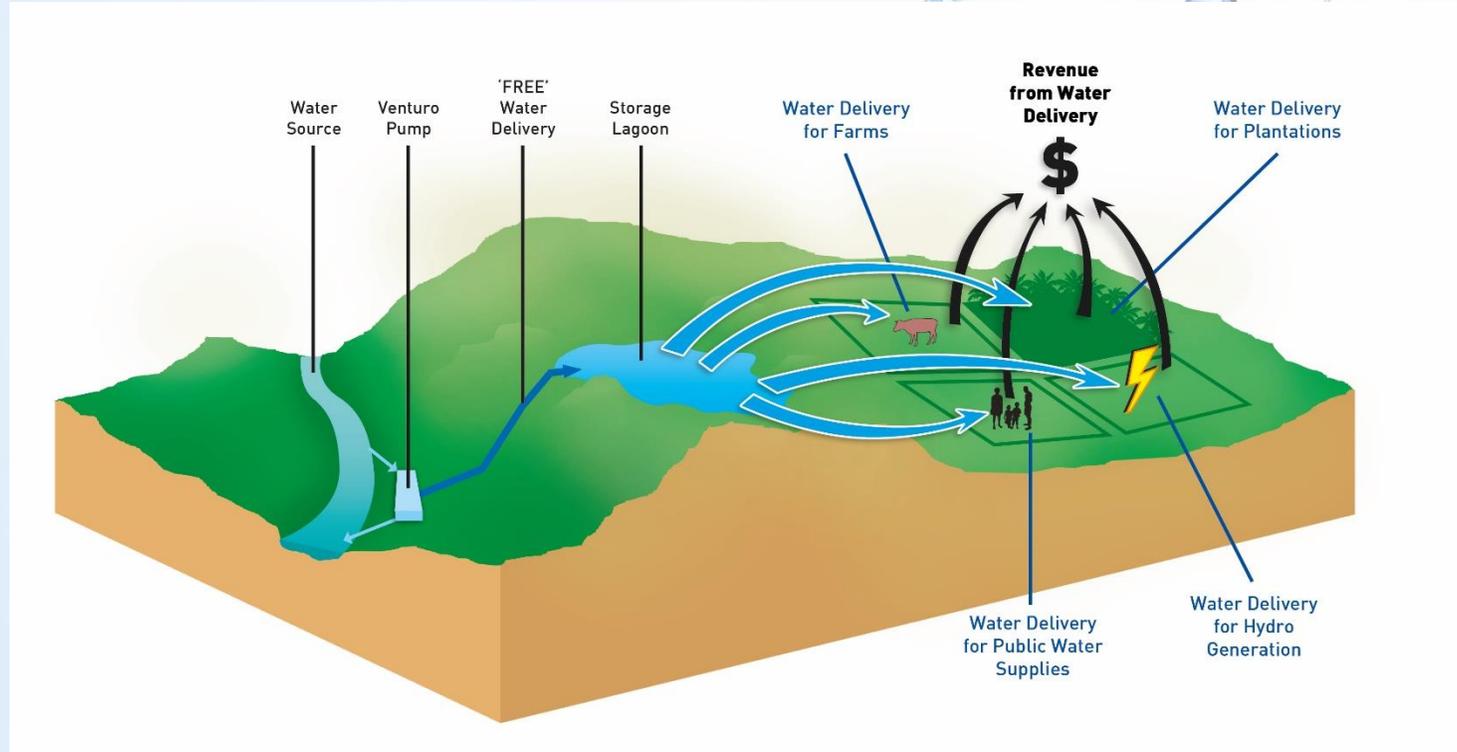
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# **Water As A Service –** *Live quotes*



# Coconut Plantation- Example Customer



With Irrigation, coconut plantation yields treble.  
Other solutions (e.g. diesel) economically unfeasible

# Coconut Plantation- Example Financing

Client plans to equity funding Phase I of a total 5 Phase project - each Phase worth approximate \$1million in Capex

Client and WPT to agree water transfer fee to attract debt funder for Phases 2-5

Client attracted to hydro power generation options as processing plant to open on site.

# Coconut Plantation- Example Financing Costs

Stored Water Available (litres)	Height Meters	Energy MW	Efficiency at 75%	Energy MWh	Price Band A £0.005/ 1000 litres	Price Band B £0.025/ 1000 litres	Price Band C £0.5/ 1000 litres	Price Band D £25/ MWh	Each Site has different Price banding structure £ / m3 charge or £/ Mwh Days Value of water Release factor
					0.005 365	0.025 100	0.5 25	25 50	
200,000,000	100	196,000	147000	40.83	1000	5000	100000	3675	
					1	0.5	0.5	1	

## Annual Revenues from Water Sales

Price Band A

**Take or Pay**

**Repays Venturo Capex**

*Assume 365 days has to be paid every day whatever*

Price Band B

**Standard Rate**

**Payment for water used**

*Assume 100 days half release (during dry periods)*

Price Band C

**Performance**

**Fee for extra water used**

*Assume 25 days half release (during drought periods)*

Price Band D

**Hydro Power**

**MwH price of hydro offtake**

*Assume 50 days full release (during wet periods)*

## Payment Bands based on

Diesel Capex

Diesel Opex

Plant crop yield enhancement

Discounted to available power sources client can access



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# Next Steps



# Next Steps

WPT and Partner select demonstration sites for first 'Water As A Service' customers

WPT has received initial inquiries from global clients across water utility, pumped hydro and agricultural sectors

WPT and Partner attract debt funding to market solution, collect site information, agree a 'Water transfer' fee and install solution

First demonstration projects form cornerstone of larger 'Sustainable Water Fund' to draw in other debt funders

# Contacts

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