

SMART HOT WATER CONTROL



S O L A R T R I C I T Y™



SMART METER

- Provides accurate usage data
- Allows correct billing of consumer, remotely.
- Allows for time of use tariff to be implemented
- Allows for net metering to be done using feed in tariffs.
- Has functional capability to control and monitor domestic appliances

Two way monitoring and control

- Bankable saving on Utility TOU tariff – smaller Munics
- Consumer not affected as hot water tank stores energy for extended periods of time
- Potential municipal income stream
- Benefit from 2 way communication
- Measurable results
- Reporting
- Secure web access and defined user levels
- Data



Eskom

- Two way communication endorsed and subsidised
- Ripple relays not subsidised
- IDM contribution historically at R3,9m per MW reduction (6pm-8pm)



Overview



ENERGY MANAGEMENT CASE STUDY

	Geysers	Installed Load (kW)	Peak Load kW Reduction Target (Weekdays 18h00-20h00, LF 17%)	RTU's	2nd
Area 1	1 541	4 596	722	1 296	245
Area 2	2 466	8 624	1 354	2 011	455
Area 3	4 025	12 719	1 997	3 408	617
Totals	8 032	25 939	4 073	6 715	1 317



PROJECT AND SAVINGS

Investors

- ESKOM - subsidised shared portion under load shifting program
- Corporate client – capital project

Savings

- Contracted TOU Annual Load Saving (evening peak) – R1.5m at targeted LF of 17%
- EE Saving (3 degrees twice per day) 3GWh pa - EE Saving R1.5m pa (based on 50c per kWh)

Total Savings = R3m per annum

50 000 geysers = R48m per annum - Consider the multiples of this for smaller municipalities

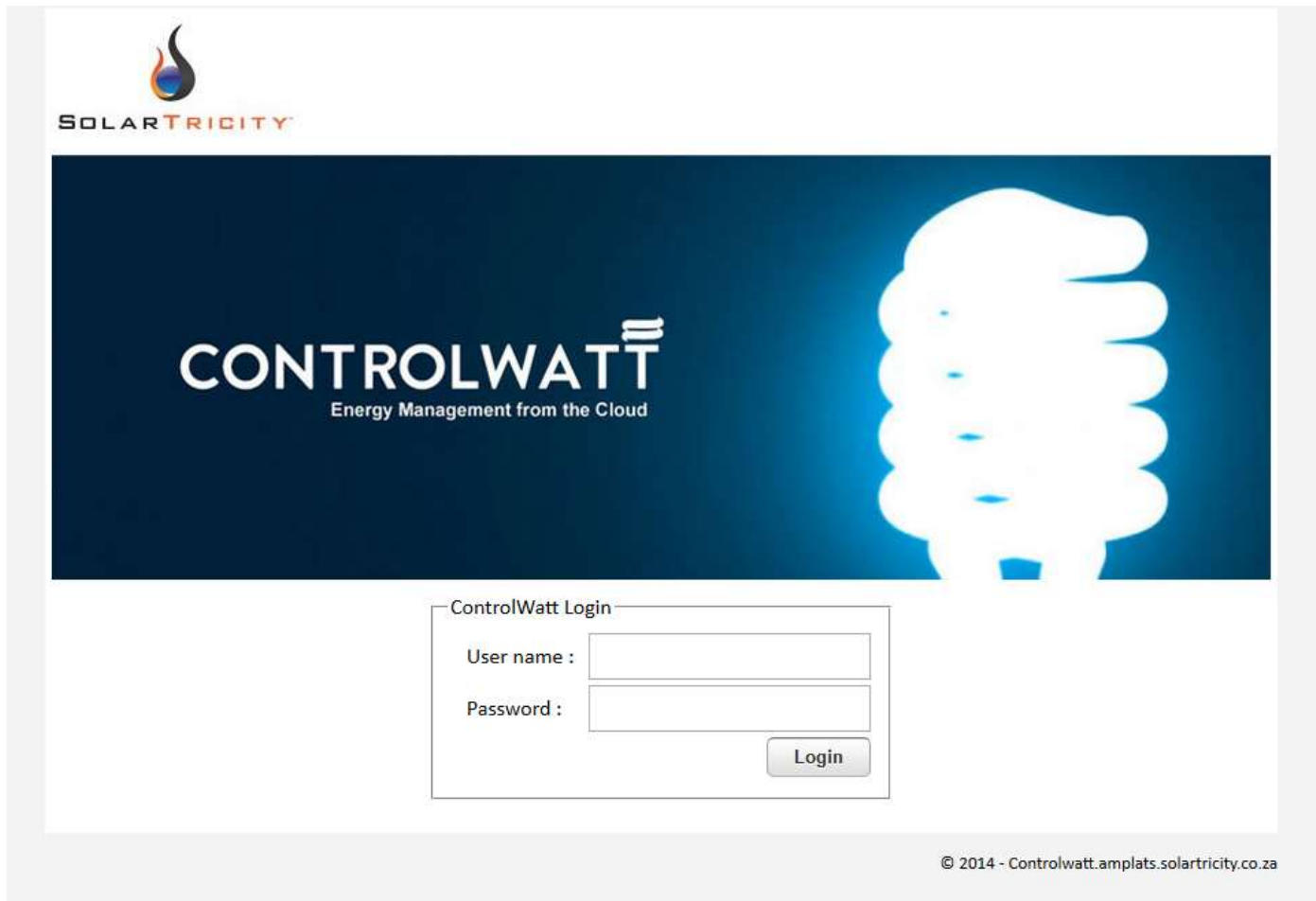


OTHER FUNCTIONAL BENEFITS

- Web based management and maintenance tool
- Flag irregularities
- Photographs and real time reporting of meters, cable theft, street light problems, sewerage etc
- GPS co-ordinates



WEB INTERFACE SECURITY



The screenshot displays the ControlWatt web interface. At the top left is the SolarTricity logo, which consists of a stylized flame icon above the text "SOLARTRICITY". The main header area features the "CONTROLWATT" logo in white on a dark blue background, with the tagline "Energy Management from the Cloud" below it. To the right of the logo is a large, glowing lightbulb icon. Below the header is a "ControlWatt Login" form with two input fields for "User name" and "Password", and a "Login" button.

SOLARTRICITY

CONTROLWATT
Energy Management from the Cloud

ControlWatt Login

User name :

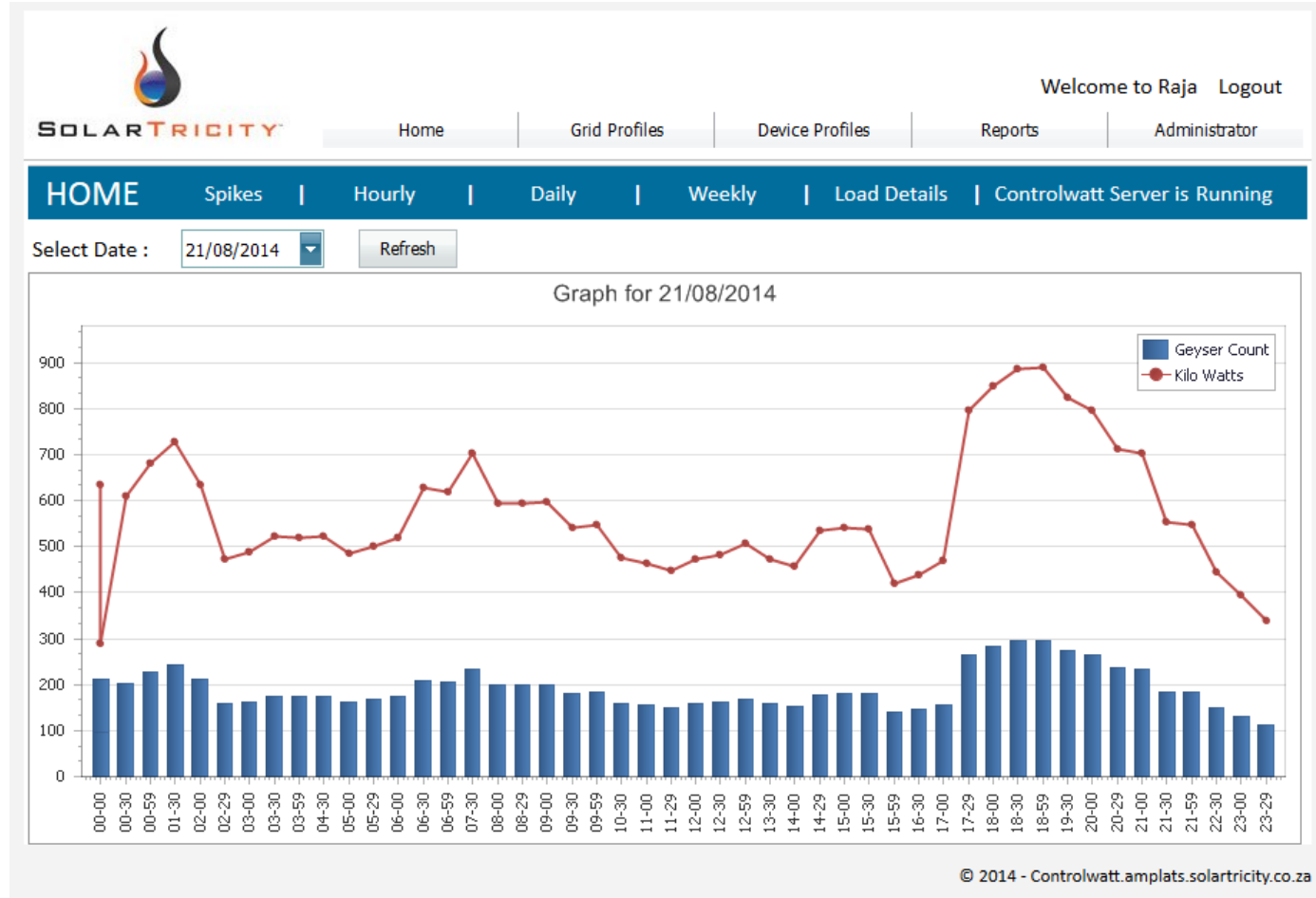
Password :

Login

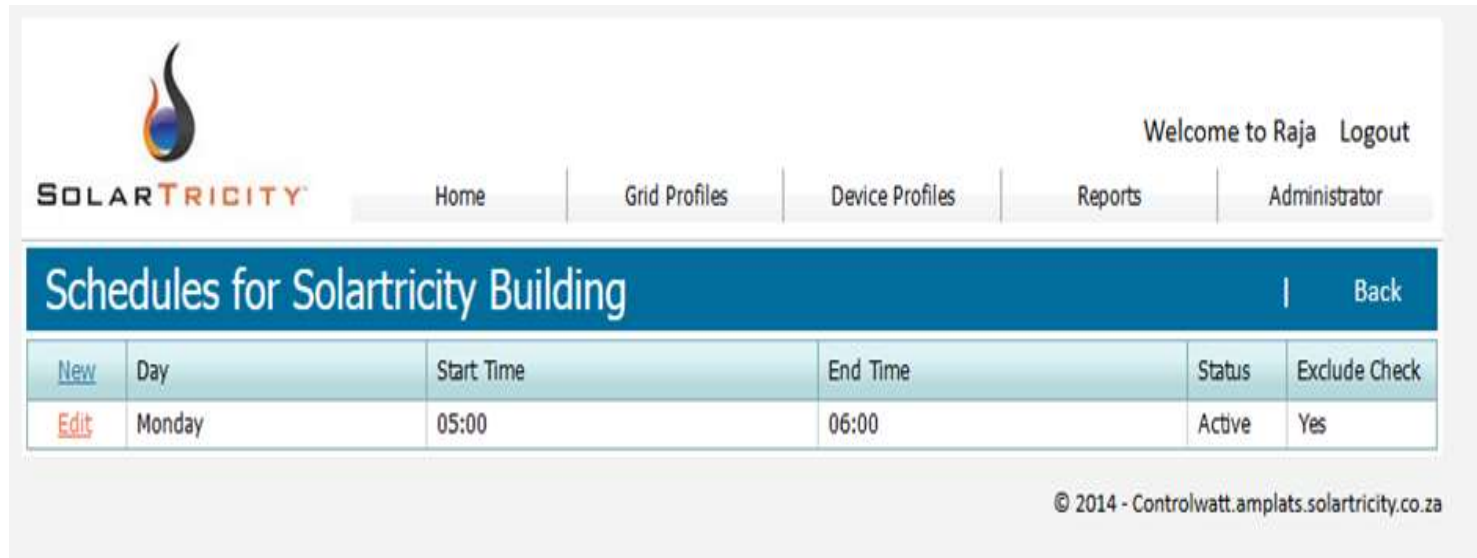
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LOAD PROFILE



SCHEDULING




The screenshot shows a web application interface for managing schedules. At the top left is the Solartricity logo, which consists of a stylized flame icon above the text 'SOLARTRICITY'. To the right of the logo is a navigation menu with links for 'Home', 'Grid Profiles', 'Device Profiles', 'Reports', and 'Administrator'. Further right, the text 'Welcome to Raja Logout' is displayed. Below the navigation menu is a blue header bar with the title 'Schedules for Solartricity Building' and a 'Back' link. Underneath the header is a table with the following data:

New	Day	Start Time	End Time	Status	Exclude Check
Edit	Monday	05:00	06:00	Active	Yes

At the bottom right of the interface, the copyright notice reads: © 2014 - Controlwatt.amplats.solartricity.co.za



TEMPERATURE CONTROL



SOLARTRICITY

Welcome to Raja [Logout](#)

[Home](#) | [Grid Profiles](#) | [Device Profiles](#) | [Reports](#) | [Administrator](#)

CHANNELS

 | [Installation Details](#) | [Back](#)

New	Name	Channel	Kw	Monitor Temp.	Temperature	Command Status	Current Status	From	To	From	To
	Channel0	0	0	Yes	20.31	On	Off	20	30	50	60

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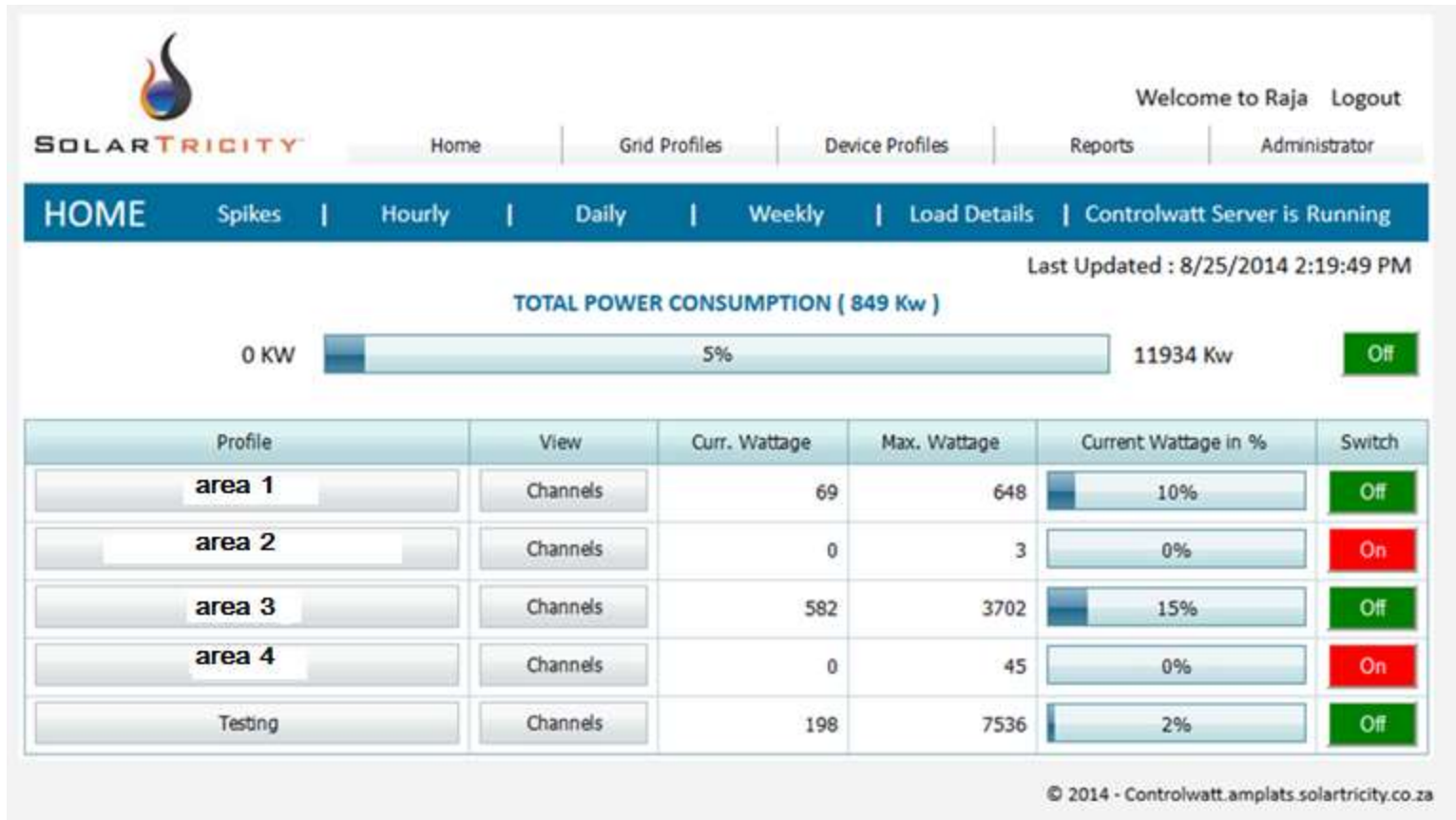
Edit Form ✕

Name	<input type="text" value="Channel0"/>	Lower Limits From	<input type="text" value="20"/>
Channel	<input type="text" value="0"/>	Lower Limits To	<input type="text" value="30"/>
Kw	<input type="text" value="0"/>	Higher Limits From	<input type="text" value="50"/>
Monitor Temp.	<input checked="" type="checkbox"/>	Higher Limits To	<input type="text" value="60"/>
Command Status	<input checked="" type="checkbox"/>		


[Update](#) [Cancel](#)



LOAD SNAPSHOT PER AREA



HISTORICAL DATA



Welcome to Raja [Logout](#)

[Home](#) | [Grid Profiles](#) | [Device Profiles](#) | [Reports](#) | [Administrator](#)

Amandelbult - 10001042 - Channel0 Details.

[Back](#)


Select Date :

Last Updated : 8/25/2014 2:25:20 PM

Time	Temperature	Digital AMPS	Status
8/25/2014 2:25:00 PM	49	18.67	On
8/25/2014 2:24:00 PM	49	18.66	On
8/25/2014 2:23:00 PM	49	18.65	On
8/25/2014 2:22:00 PM	48.94	18.65	On
8/25/2014 2:21:00 PM	48.94	0	Off
8/25/2014 2:20:00 PM	48.94	0	Off
8/25/2014 2:19:00 PM	48.88	0	Off
8/25/2014 2:18:00 PM	48.88	0	Off
8/25/2014 2:17:00 PM	48.88	0	Off
8/25/2014 2:16:00 PM	48.88	0	Off
8/25/2014 2:15:00 PM	48.88	0	Off
8/25/2014 2:14:00 PM	48.88	0	Off
8/25/2014 2:13:00 PM	48.88	0	Off
8/25/2014 2:12:00 PM	48.88	0	Off
8/25/2014 2:11:00 PM	48.88	0	Off
8/25/2014 2:10:00 PM	48.81	0	Off
8/25/2014 2:09:00 PM	48.81	0	Off
8/25/2014 2:08:00 PM	48.75	0	Off
8/25/2014 2:07:00 PM	48.75	0	Off
8/25/2014 2:06:00 PM	48.75	0	Off




SITE SPECIFIC DATA

 Welcome to Raja Logout

Home Grid Profiles Device Profiles Reports Administrator

Installation Details

	Serial No	100001216	Size	150
	Kilo Watt	3	Relay	False
	GPS Latitude	27.38528625	GPS Longitude	-24.7600334333333
	Contact Person		Contact No	
	Address	Amandelbult, Dishaba, Dishaba - 13.		
	Installed Time	7/31/2014 10:34:05 AM		
	Note 1			
	Note 2			
	Note 3			
	Note 4			



Thank you

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