

HYDROMETER

Abu Dhabi Green Building Conference November 3rd, 2008



Torsten Hägele, Head of Sales Middle East – HYDROMETER GmbH

DIEHL
Metering

DIEHL Metering

Agenda

- The responsibility
- The right meter for the right application
- How AMR contributes to conserve energy
- Interaction with the customer
- Potential reduction

The responsibility

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The reduction of carbon footprint and energy conservation is a world-wide initiative.

Within EUROPE, governmental entities have set-up various regulations for energy conservation and sustainability, targeting the efficient and transparent measurement of water, gas and energy recourses.

The aim of these regulations is to encourage the households to change their consumption habits to subsequently minimize the waste of recourses.

The right meter for the right application

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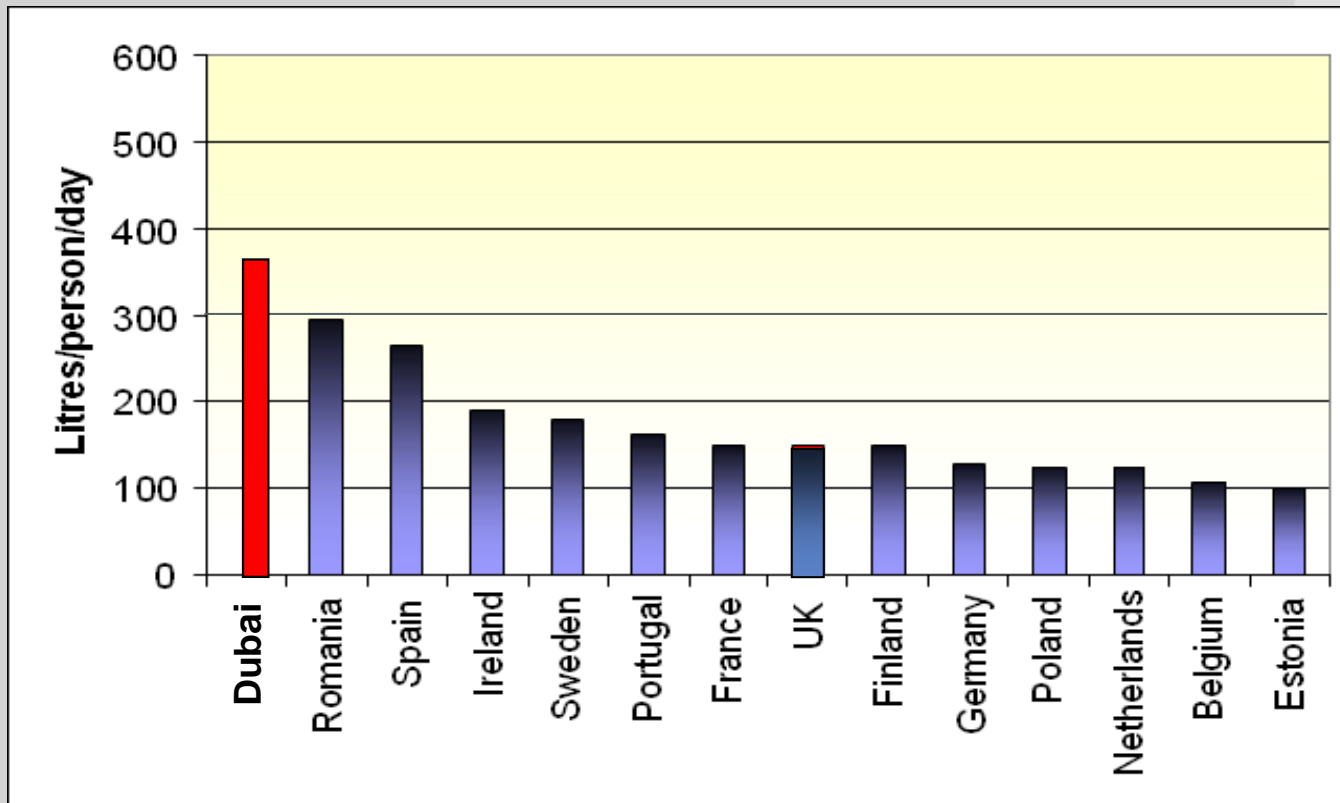
Ultrasonic Water Meter



The right meter for the right application

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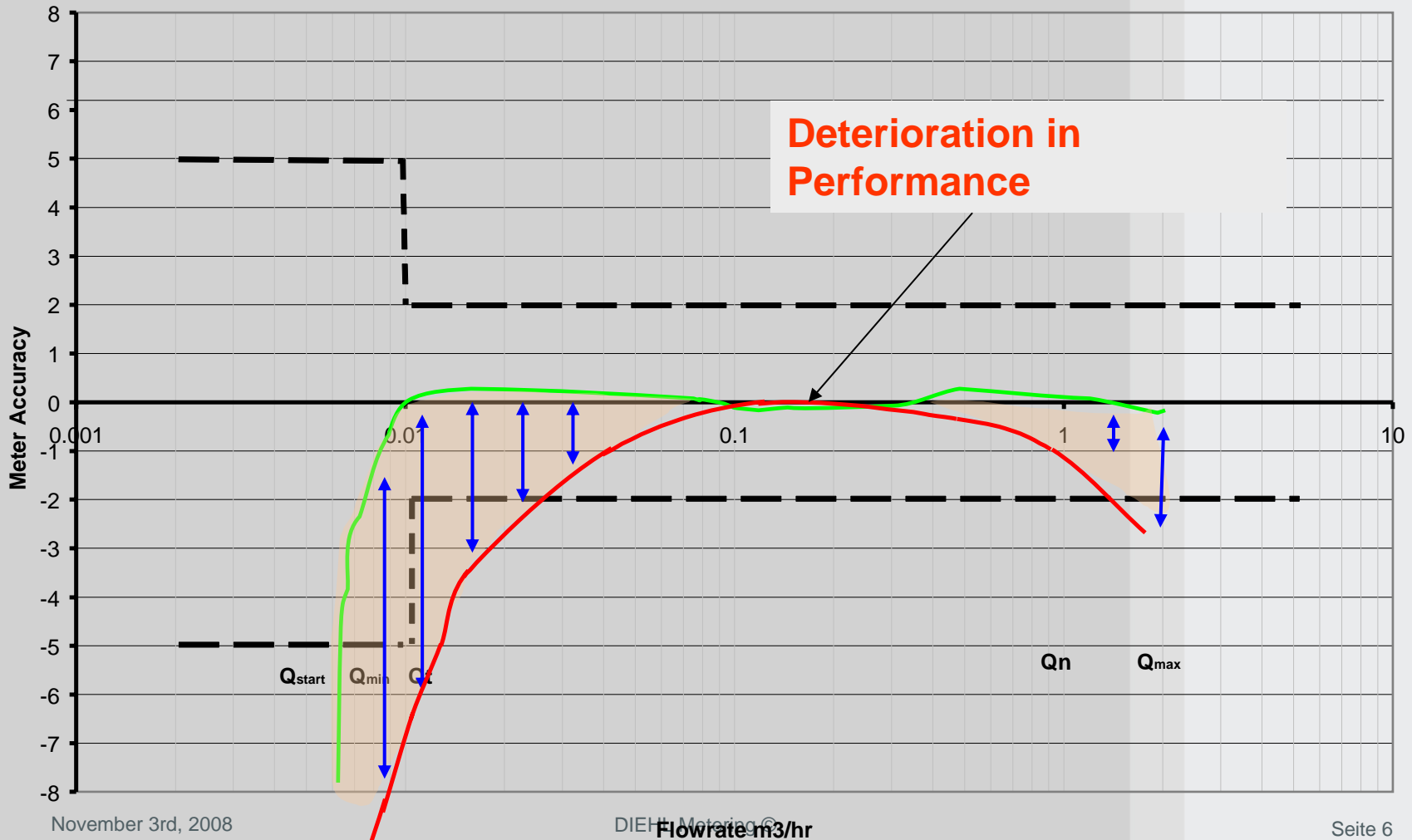
Water consumption in the UAE



The right meter for the right application

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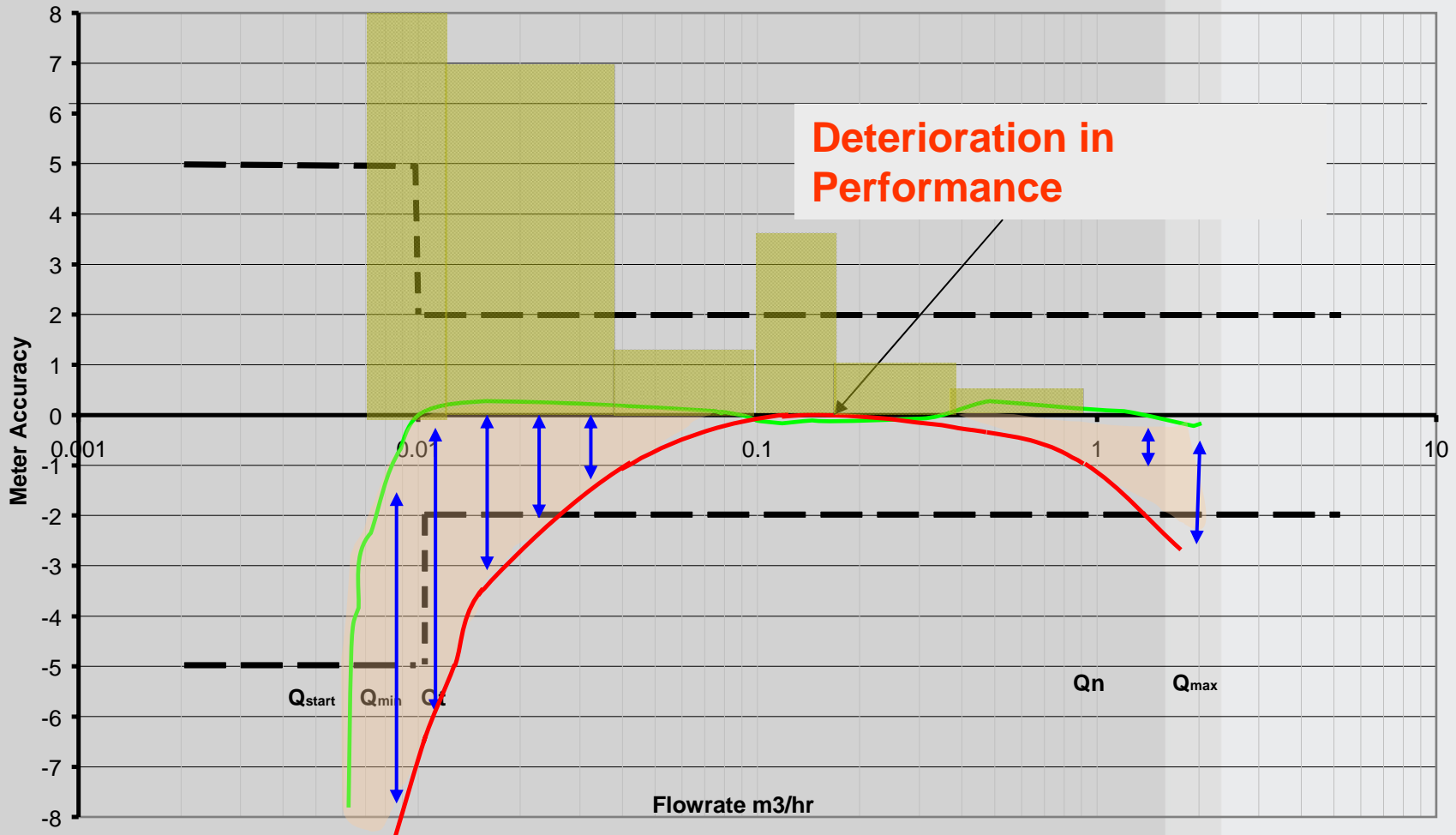
Ultrasonic vs. mechanical meter



The right meter for the right application

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Ultrasonic vs. mechanical meter



The right meter for the right application

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The effect of inaccurate measurement

Based on various test installation and analysis the reading difference of an state-of-the-art static* meter vs. a mechanical meter in the GCC countries sum up to an average of 20% per year!

Example calculation:

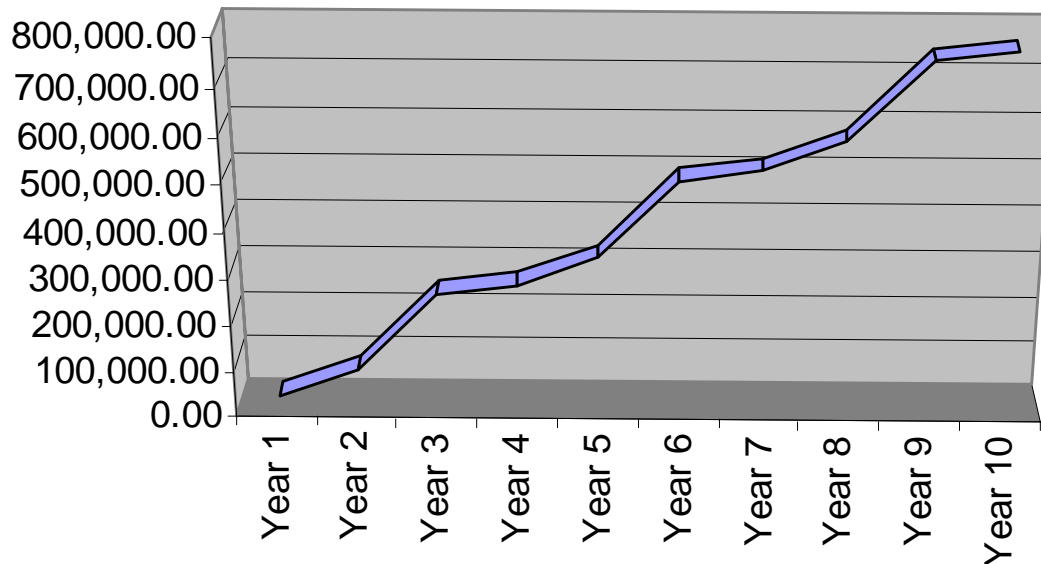
- 378 liters of water / day / capita
- Installation period of 10 years!
- Average of 3 persons / property

The right meter for the right application

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Waste of water due to incorrect measurement

Cummulated loss of water in liter



AMR systems helping to conserve energy

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State-of-the-art AMR technologies



AMR systems helping to conserve energy

Use of AMR system will provide answers to:

- What causes leakages?
- What causes under-registration?
- What causes wrong billing data?
- What causes erroneous readings?
- What causes wrong measurement data?
- and many more.....

AMR systems helping to conserve energy

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Adaptive and flexible AMR systems

Reliable information in time are defining today's successful companies and decide about leadership in this competitive environment.

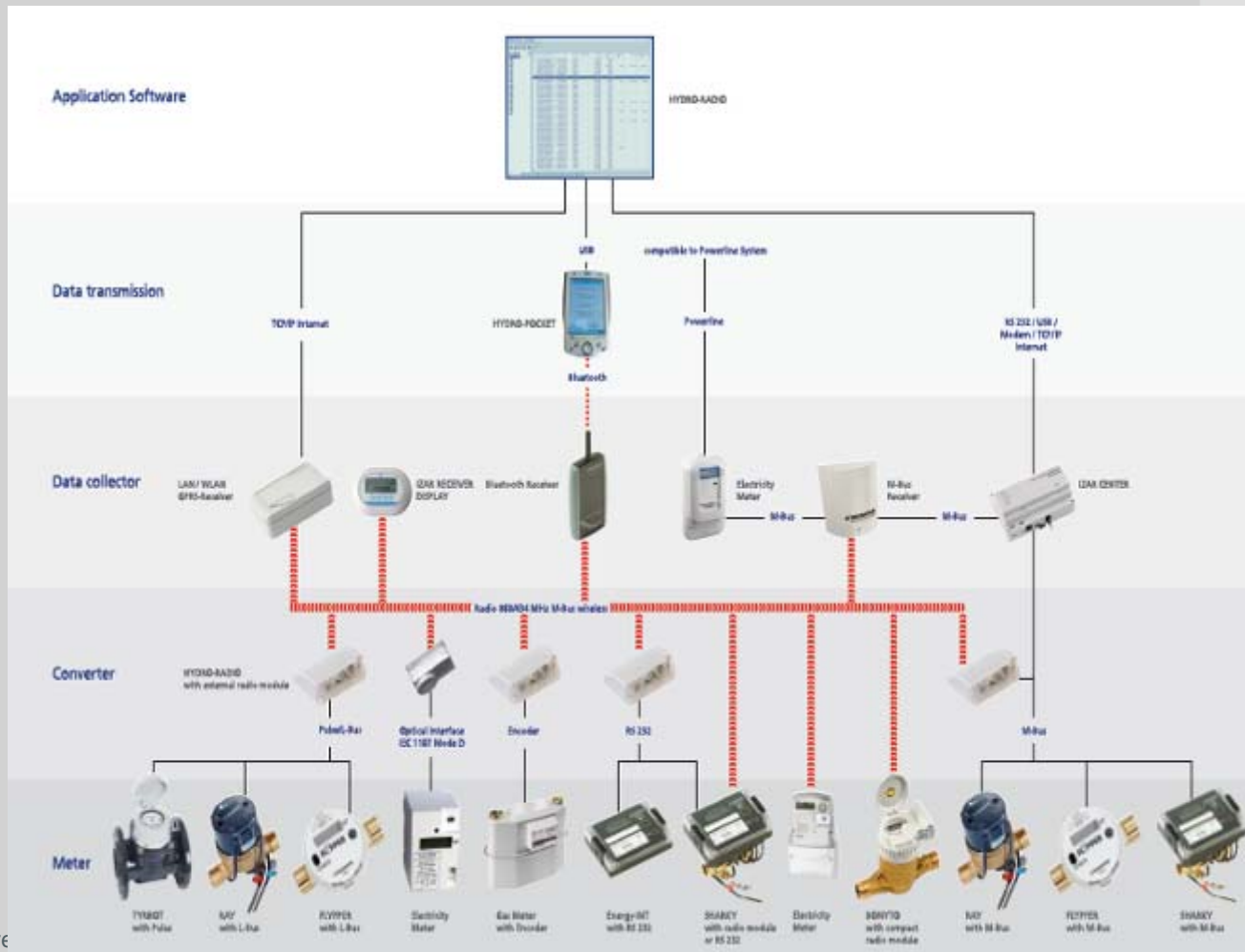
Within the metering solutions this means the availability of real data transmission via adequate AMR systems using either

- Wireless or
- Wire based technologies.

AMR systems helping to conserve energy

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Adaptive and flexible AMR systems



AMR systems helping to conserve energy

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AMR systems helping to conserve energy

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Benefits on the utility side:

- Leakage detection to avoid waste and subsequently conservation of natural resources
- On-demand production and distribution optimization reduce the overall use of energy
- Demand side management to reduce the operational waste
- Longer product life-cycles reduce both the energy during production and the later recycling

and many more.....

Interaction with the customer

Details within the bill

www.emsar.com - billing and accounting

EMSAAR Properties PSC P.O. Box 3640
Dubai, U.A.E.
Tel: 0344 4226329-0
Fax: 0344 4226329-7
info@emsar.com

Cooling cost accounting 2008

Summary for property management / owner

Object: Nr. 0014635-1
Marina Crown
12345 Dubai

Period: 01.07.2008 - 31.07.2008
corresp.: 31 Days / 151 Permissible days

Created on: 15.10.2008

Overview:

Total costs:	1.670,00 \$
Total payments:	1.670,00 \$
Difference of truncation:	0,00 \$

Month	Permissible state per month	Permissible state per day
January	1	0,03
February	2	0,07 (0,07)
March	48	1,29
April	78	2,00
May	129	4,18
June	145	4,67
July	151	4,67
August	153	4,94
September	138	4,33
October	96	2,12
November	58	1,59
December	22	0,71
Annual	1308	

Distribution:

Summary Cooling cost accounting 2008, Object:0014635-1 Page 1 from 4

Table of cooling costs of property

Combustibles	Date	natural gas at KWh	VAT	Amount	Amount gross
Purchase	31.07.2008	9.613,000	0,00%	1.670,00 \$	1.670,00 \$
Consumption:		9.613,000		1.670,00 \$	1.670,00 \$
Total cooling costs:				1.670,00 \$	1.670,00 \$
Total direct costs:					0,00 \$

Price per unit

	Amount	Total of units	=	Price per unit
Total cooling costs:	1.670,000 \$			
Portion of costs for heating:	1.670,000 \$			
30% active surfaces cooling costs	501,000 \$	455,000 m²		1,1011 \$ /m²
70% consumption cooling costs	1.169,000 \$	9.879,300 KWh		0,1183 \$ /KWh
Portion of costs for hot-water:	0,0000 \$			

Summary Cooling cost accounting 2008, Object:0014635-1 Page 2 from 4

Interaction with the customer

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The customer portal

User portal

Welcome Mister

Under your user ID we have the following apartments :

Property	Floor	Apartment	Date of move in	Date of move out
The Residences Tower 3	3. floor	0004	01.01.2001	15.10.2008

Please choose from the menu on the left.

We want to improve our service everytime.
If you have any queries, please feel free to [contact us](#).

TOP

Potential reduction

The introduction of efficient metering and AMR technologies have provided various leverages.

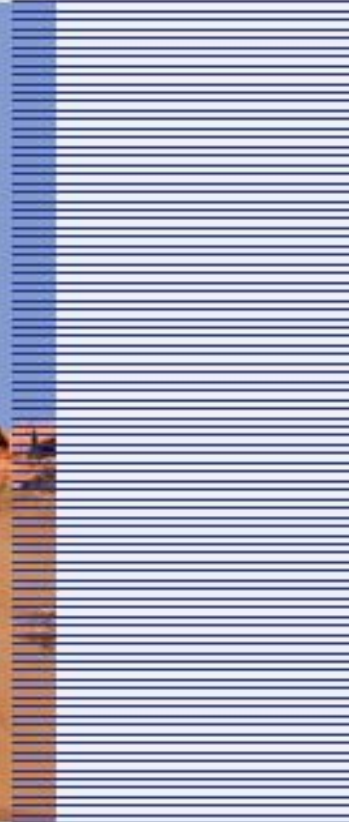
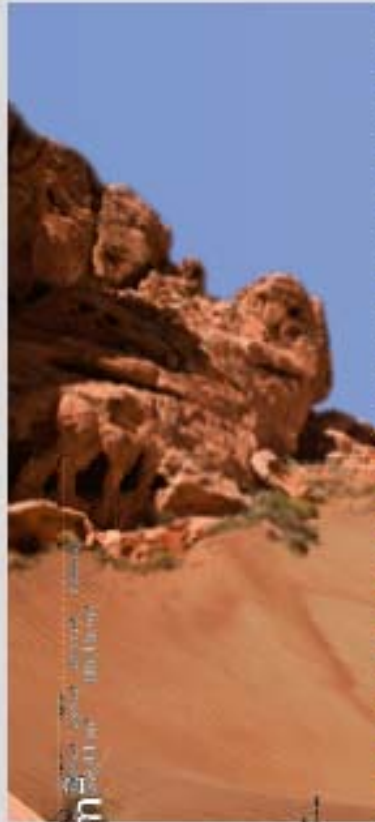
Based on studies furnished over the last 15 years, by comparing un-metered and metered consumers, the allover reduction of water, electricity and gas is between 20 - 30 %!

On the utilities side, the implementation provides another reduction of 15 - 35% based on the technologies already in use!

Smart in Solutions

Multi Utility metering and billing services

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