

Remote Energy Management & OpEx Reduction Solutions

Confidential Information

Who we are?

Business Focus

LCC provides communications products, services and integrated solutions to the telecommunications, enterprise and government markets – globally

Target Markets

Telecom Operators & OEMs

Large Enterprise

Government/Health/Education Verticals

Headquarters

Vienna, US

Employee Base

3,600+

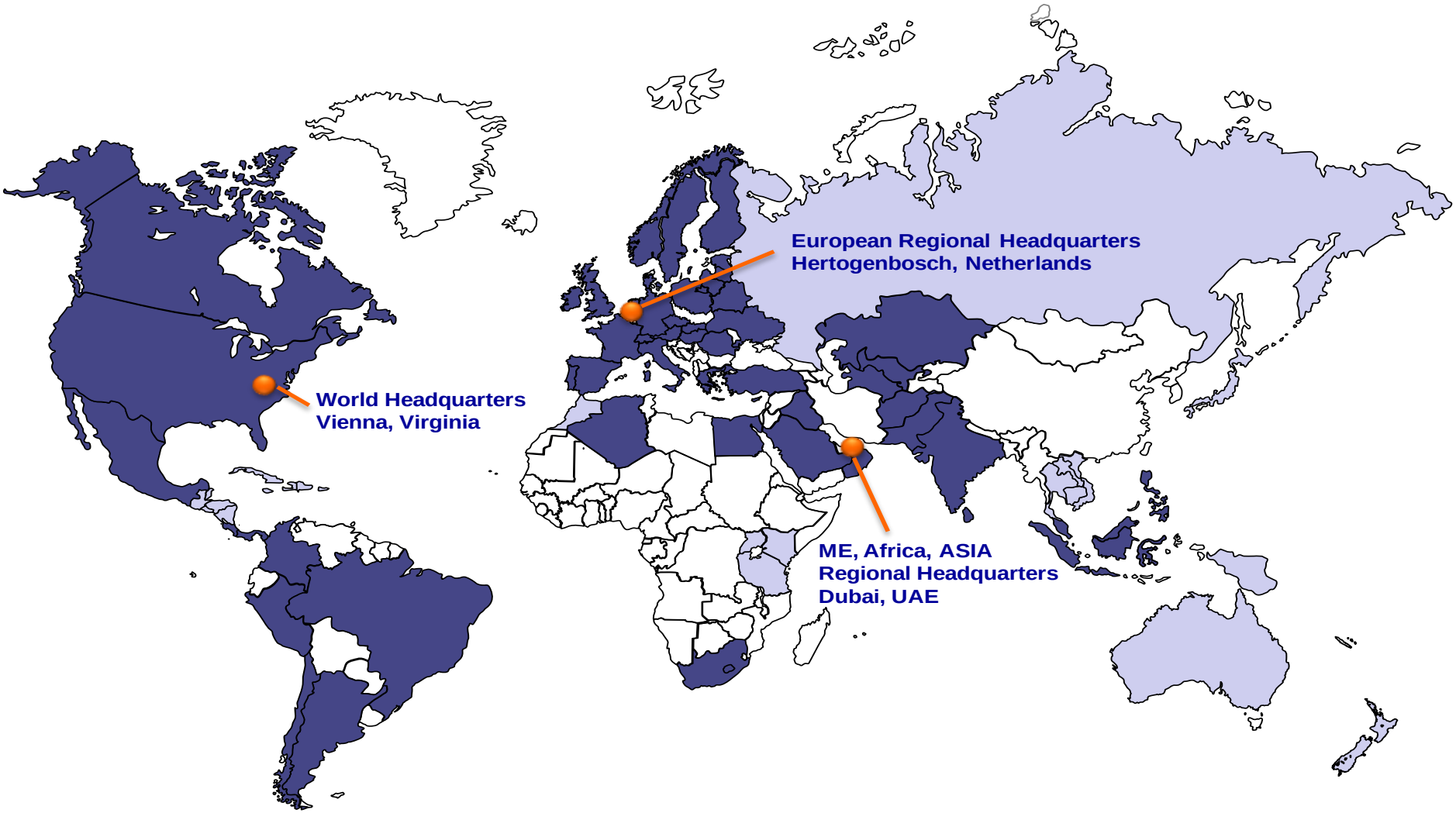
Established: 1983

30 Years of Experience

Global Operations

40+ Countries

Where we are?


European Regional Headquarters
Hertogenbosch, Netherlands
World Headquarters
Vienna, Virginia
ME, Africa, ASIA
Regional Headquarters
Dubai, UAE

What we do?



Consulting Services

Technology Evaluation & Network Architecture

Network Engineering, Design & Optimization

Product / System Vendor Evaluation

Network / Process / Performance Audit

Program and Project Management

Spectrum Auction Services



Integration Services

Turn-Key Network Infrastructure

Deployment and Construction

Equipment Install, Commission & Integrate

Systems Testing and Acceptance

Systems / Network / Application Integration

Multi-Technology / Transport Backhaul Network I&C

Specialized services such as SA, ROE, A&E, Permitting, Metro E



Operation Services

Network Monitoring & Management

Full-Lifecycle Network Outsource

Continuous Network Measurement & Optimization

Preventative & Corrective Maintenance

On-Site Technical Services & Staffing

Remote Technical Services



Solutions Services

Small Cell/In-building/DAS Lifecycle Solutions

Hybrid Fiber-Microwave Transport

Customer Experience management (CEM) Solutions (Active & Passive)

IP & TDM Transport Solutions

Energy Management, Remote Monitoring, Solar/Hybrid Solutions

Multi-Vendor Managed Service Support

Who we work with?

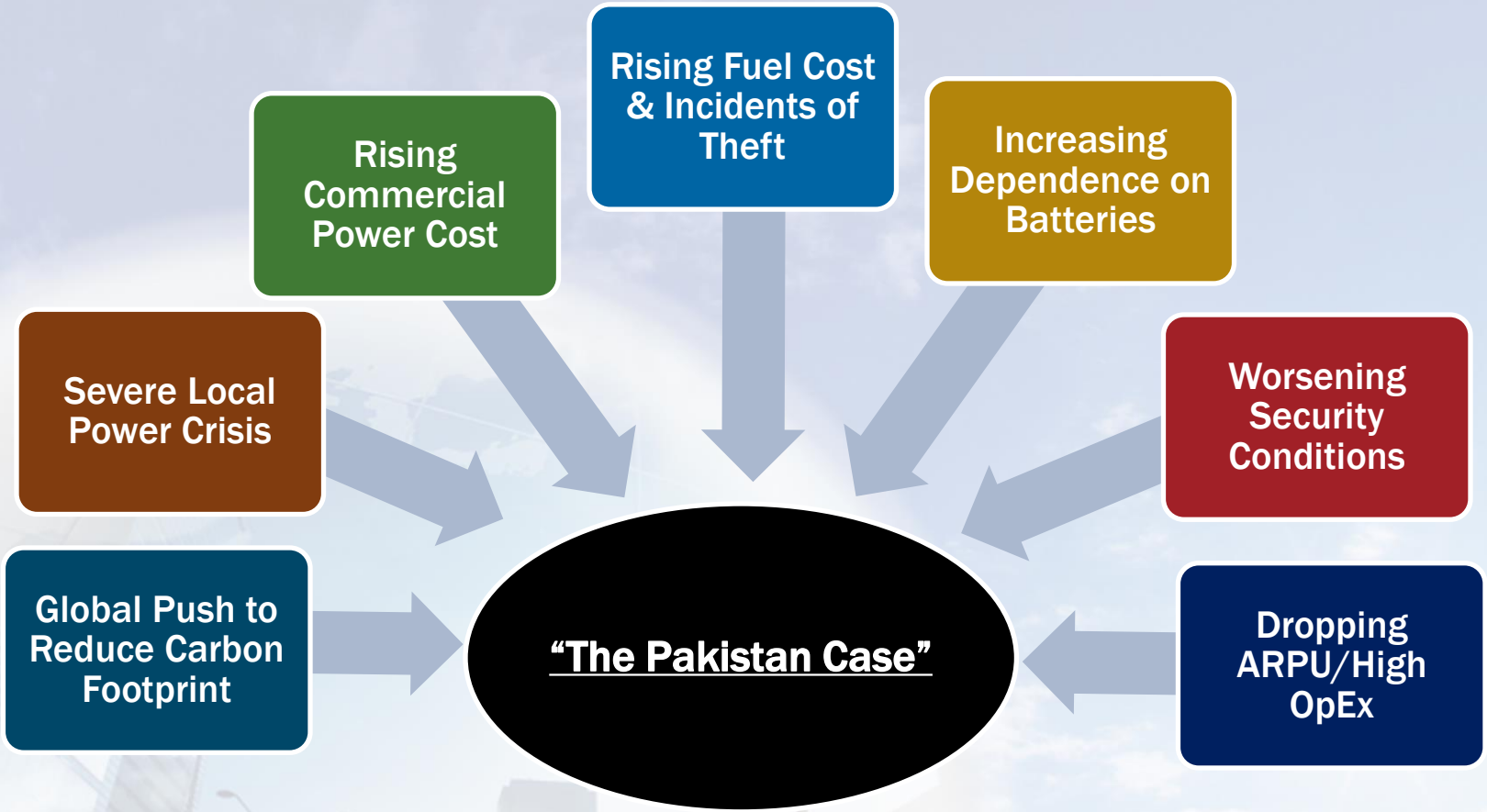
Involved with more than **450** networks, operators, equipment vendors & regulatory bodies



LCC Pakistan

Founded	2005
Head Office	Islamabad, Head Office for Asia Pacific Region
Regional Offices	Lahore, Karachi, Multan and Faisalabad
Employees	800+
Major Clients	Telenor, CMPak, Warid, Huawei, ZTE, Ericsson, PTCL, etc
Services Portfolio	Network Planning, RF Optimization, Drive Testing, Model Tuning, Riggers Provisioning, Consultancy, Deployment, Transportation, etc
Product Portfolio	**Remote Energy Management & OpEx Reduction Solutions**
Experience	**2,400 Sites Installed & Commissioned since 2011**

Our Energy Efficiency Drive



Solution Brief

Remote Energy Management & OpEx Reduction Solution

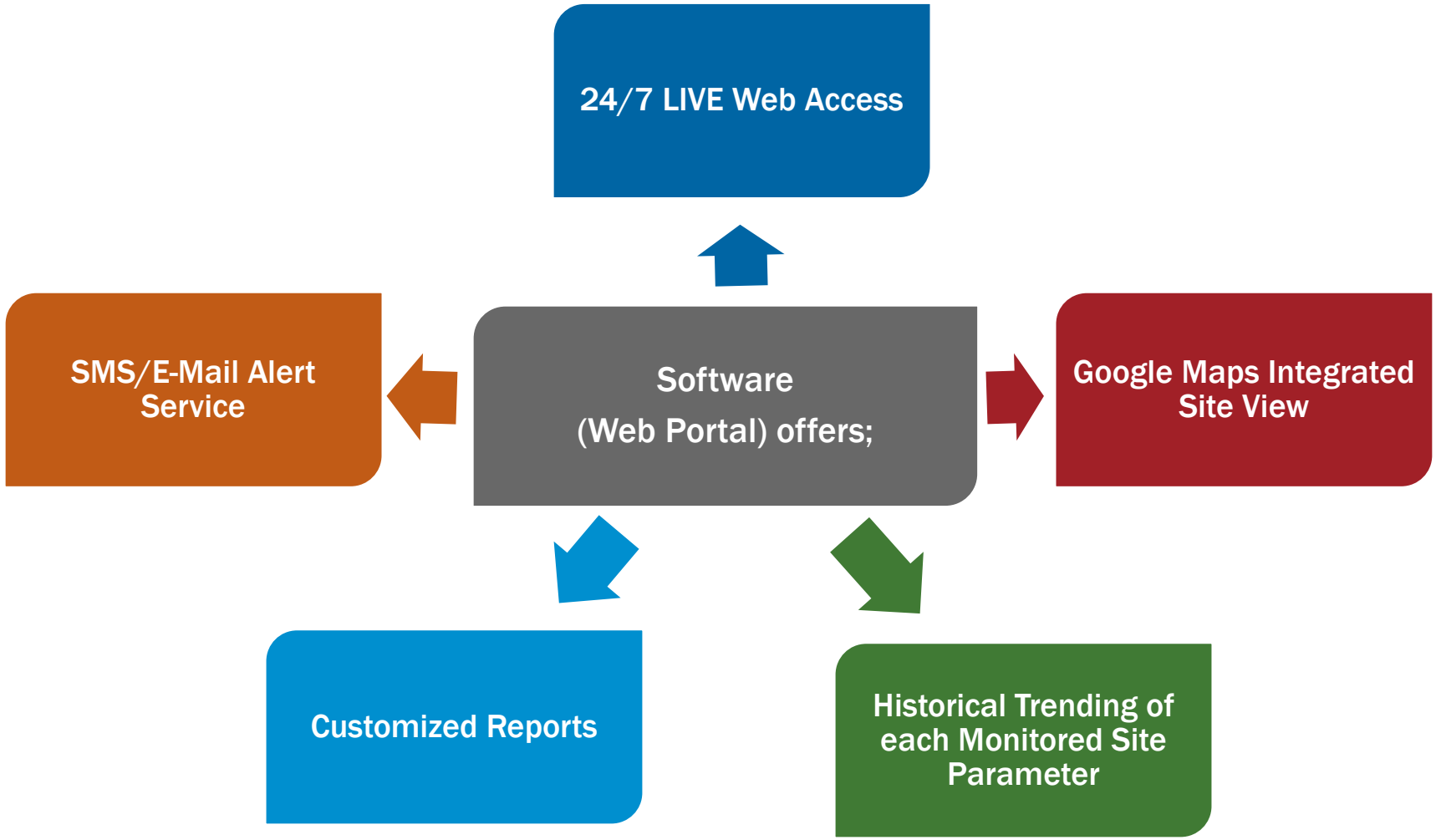
- ❑ Focused at Real-Time Remote Energy Management and OpEx Reduction for Telecom Operators & Vendors
- ❑ Solar Hybrid Solution

Solution Brief

Remote Energy Management & OpEx Reduction Solution addresses the following areas:

1. Fuel OpEx Reduction up to 70% by Intelligent Generator Usage Control & Power Source Switching
2. Fuel Monitoring and Inventory Management
3. Energy Consumption Audit (Profiling & Benchmarking)
4. Tariff Optimization by selecting the cheapest Power Source (Utility Power, Batteries, Generator)
5. Individual Battery Health Analysis for Preventive Maintenance

Solution Brief



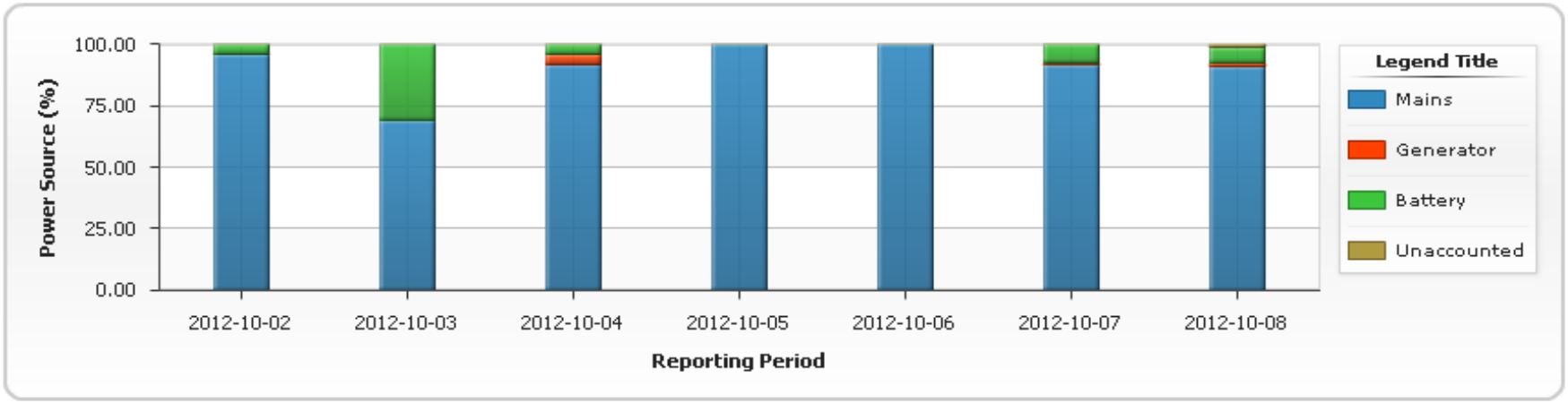
Fuel Saving: Performance Report

See how effective is your Generator Manager and Correlate Generator Runtime with Fuel Consumption while ensuring that the Generator Manager is active and not by-passed!

SEQC1 Performance Report

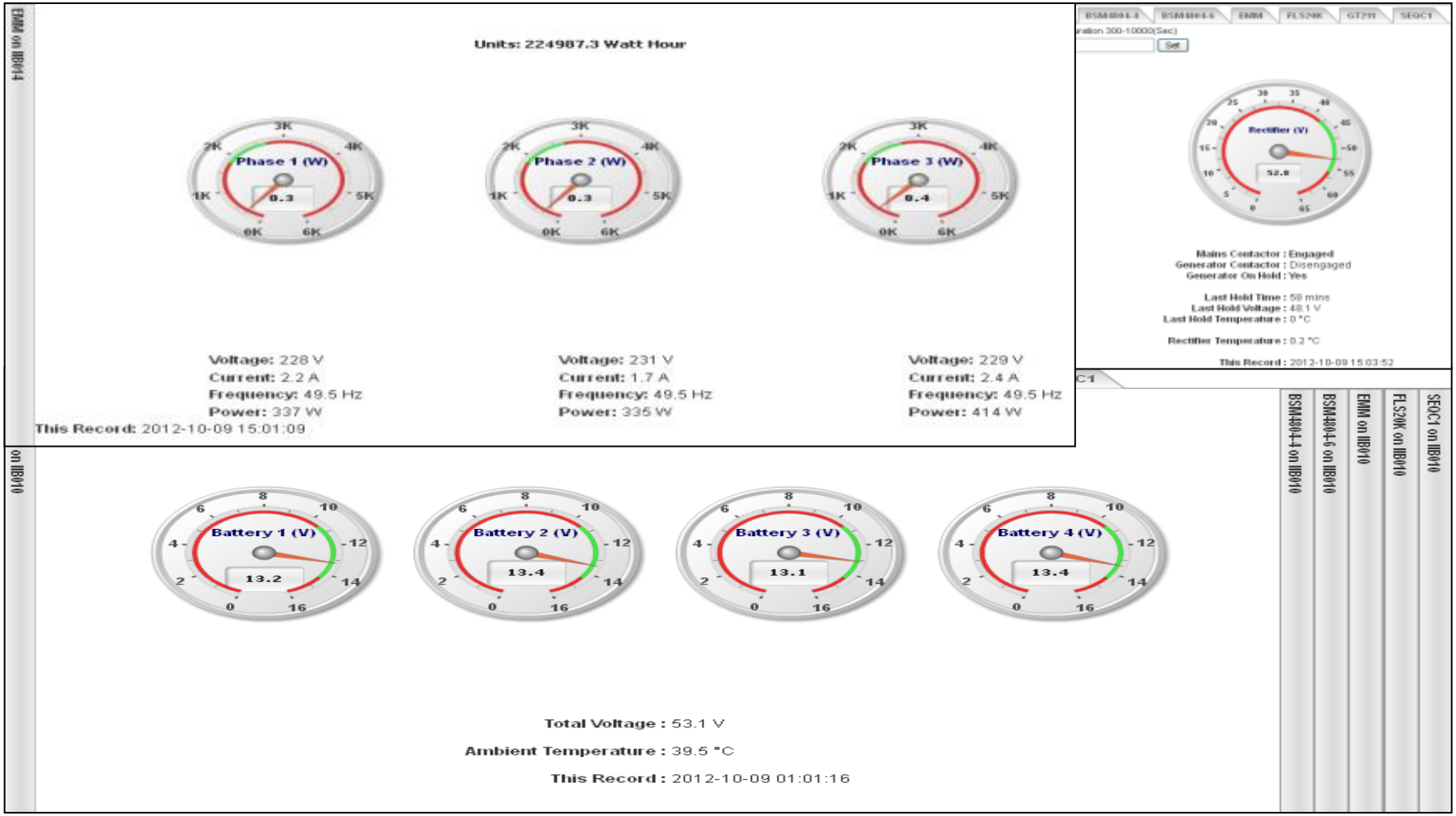
Site: IIB014

From 2012-10-02 To 2012-10-08



Date	Mains		Generator		Batteries		Unaccounted	
2012-10-02	22:57:45	95.68%	00:03:28	0.24%	00:57:16	3.98%	00:01:31	0.11%
2012-10-03	16:31:37	68.86%	00:01:24	0.10%	07:26:29	31.01%	00:00:30	0.03%
2012-10-04	21:54:08	91.26%	01:01:40	4.28%	01:02:08	4.31%	00:02:04	0.14%
2012-10-05	23:59:57	100.00%	00:00:00	0.00%	00:00:00	0.00%	00:00:03	0.00%
2012-10-06	23:58:51	99.92%	00:00:00	0.00%	00:00:00	0.00%	00:01:09	0.08%

Instrument Panels: Fuel, Energy, Batteries



Solar Solution add-on







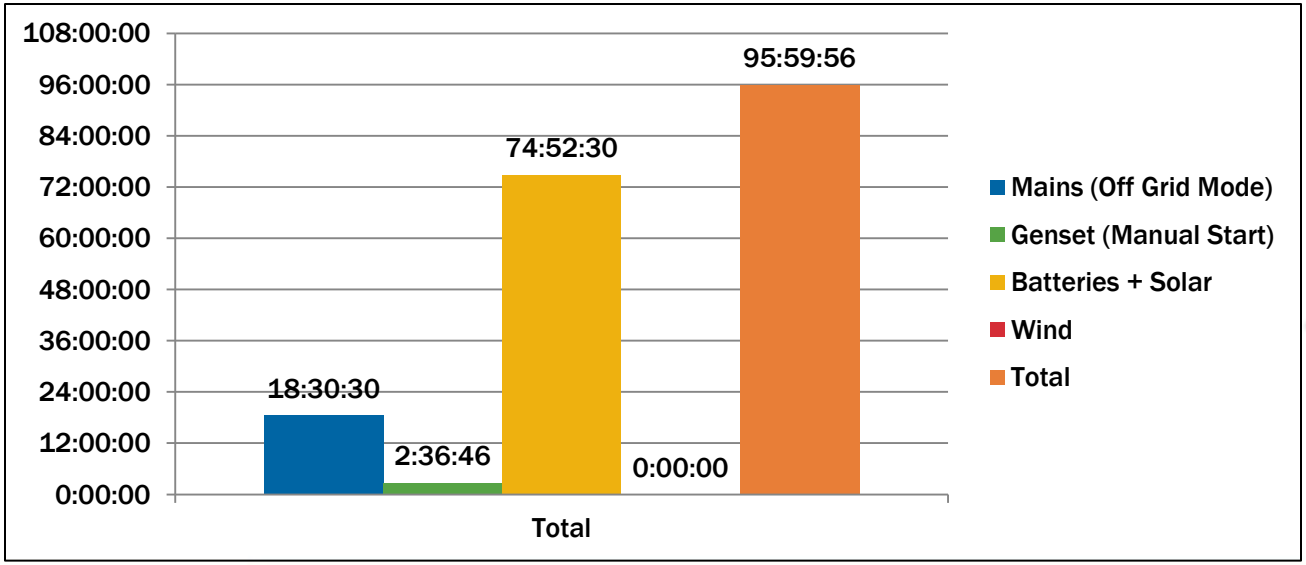




Solar Solution add-on

Telecom Operator in Pakistan – Solar Trial Site - Time Split Results					
Date	Mains (Off Grid Mode)	Genset (Manual Start)	Batteries + Solar	Wind	Total
7/1/2013	0:00:00	2:36:46	21:23:01	0:00:00	23:59:59
7/2/2013	5:21:15	0:00:00	18:38:45	0:00:00	23:59:59
7/3/2013	7:11:37	0:00:00	16:48:23	0:00:00	23:59:59
7/4/2013	5:57:38	0:00:00	18:02:21	0:00:00	23:59:59
Total	18:30:30	2:36:46	74:52:30	0:00:00	95:59:56

Up to 75% Savings on Commercial Power



Up to 90% Savings on Generator Fuel

Commercial References

China Mobile Pak Ld. (Zong)

Telenor Pakistan

Warid Telecom

Etisalat Egypt - Technical Trial Successfully concluded in Cairo. Response to RFP submitted. Commercial Negotiations underway.

Afghan Telecom - Technical Trial Successfully concluded in Kabul. Commercial Negotiations underway.

Operational Challenges

- Resistance to Change
- Security of Equipment
- Cash-flow Issues

Why LCC?



Indigenous Design

In-house Research & Development Team

Quick Customization (Hardware & Software)

Complete Automated Assembly Plant

Open Source Software
No licensing, No fee

Nationwide Installation Base

After Sales Support Network

Competitive Price

Thank You