Turning **insight** into **action**.

OSIsoft. USERS CONFERENCE 2011

Business Intelligence with the PI System and PowerPivot

Presented by **Matt Ziegler**, Product Manager, OSIsoft

Goals

- Refresher on Business Intelligence (BI)
- Case Study: OSIsoft customer's everyday BI
- Show the value of BI
  - Use what you already know
  - Demonstrate PI DataLink and PowerPivot

Results – Collaboration and Sharing

"BI is no longer an individual activity. Our people have to work together in more powerful, data-driven ways. OSIsoft and Microsoft are making that happen for CFE."

Fernando Barradas, Director of Information Applications, Comisión Federal de Electricidad

cenace
Centro Nacional de Control de Energía

Case Study Publication: http://tinyurl.com/4qa3nsq

CFE Comisión Federal de Electricidad

Results – Utilize Existing Knowledge

"Everyone knows Excel. With our BI solution accessible through Excel Services 2010 and tools such as PowerPivot for Excel 2010, training costs will be extremely low, and everyone who needs BI access will have it."

Fernando Barradas, Director of Information Applications, Comisión Federal de Electricidad

cenace
Centro Nacional de Control de Energía

Case Study Publication: http://tinyurl.com/4qa3nsq

CFE Comisión Federal de Electricidad

Results – Monetize PI System Data

"We knew that OSIsoft and Microsoft could help us save money through superior BI. But we didn't appreciate the extent of the savings until we began to see what their solutions could do."

Fernando Barradas, Director of Information Applications, Comisión Federal de Electricidad

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Centro Nacional de Control de Energía

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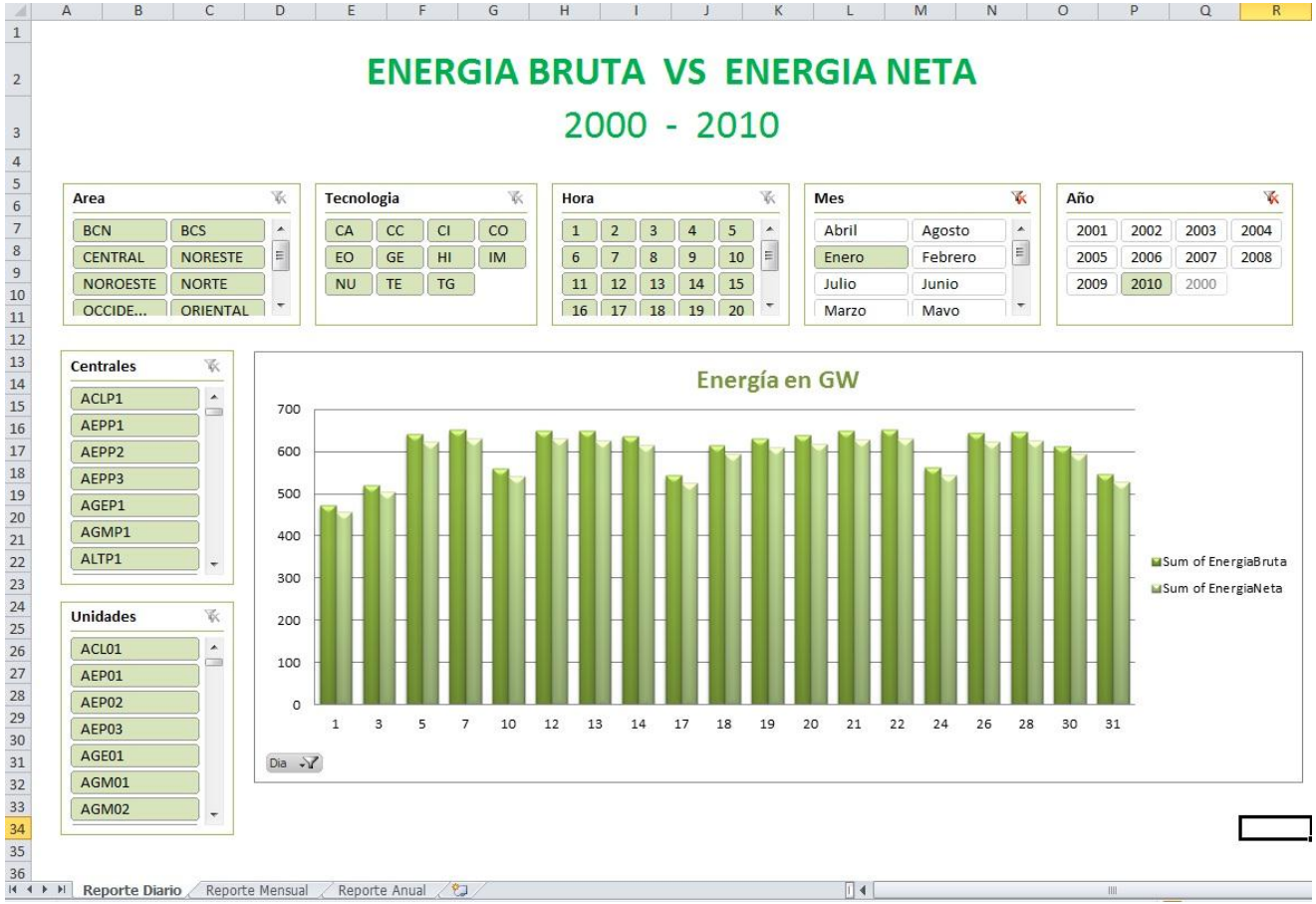
CFE Comisión Federal de Electricidad

Reports

Energy Efficiency

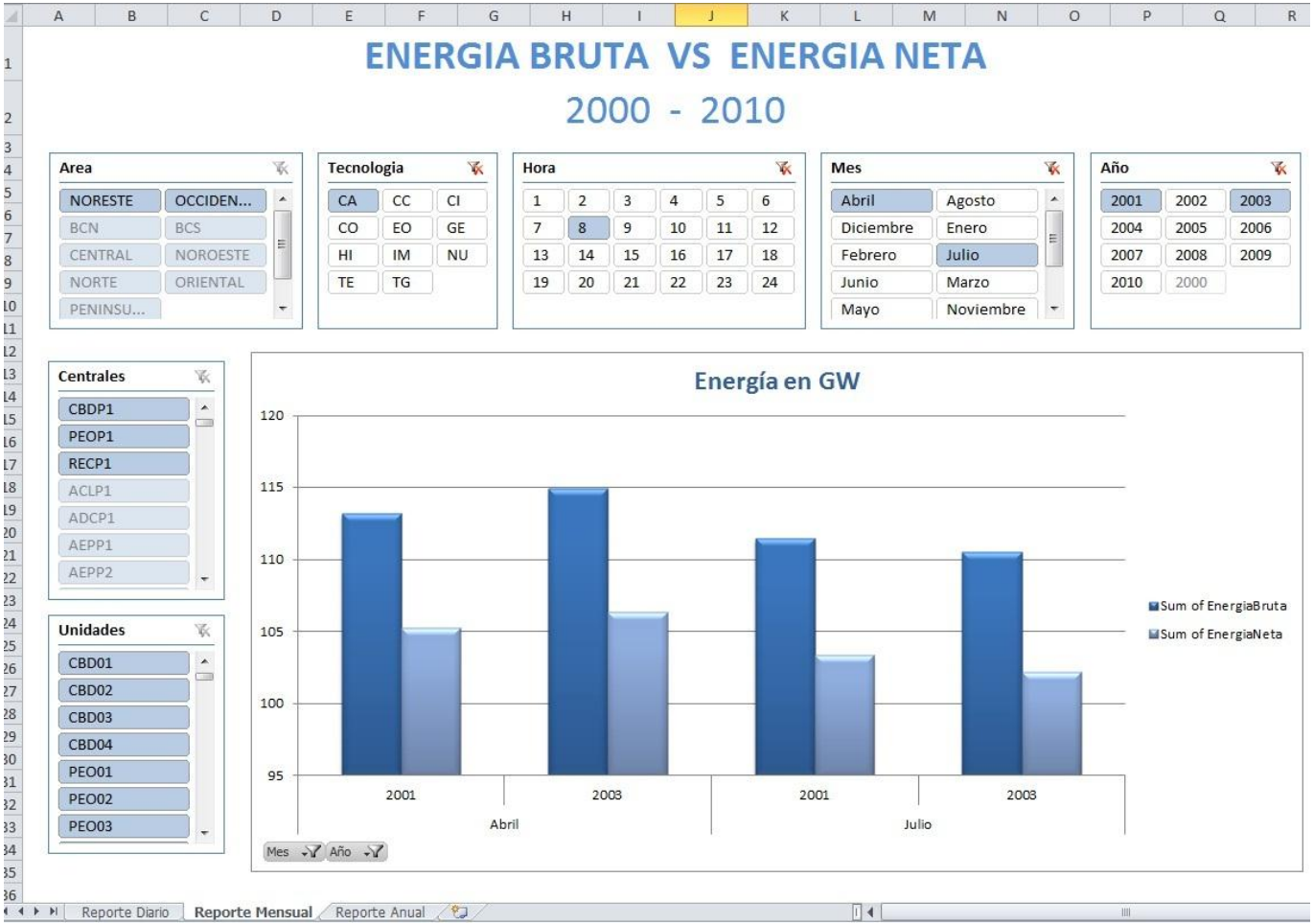
January 2010
All Plants
All Generation Types



Reports

Energy Efficiency

Region
Technology
Hour
Month
Year
Plant
Units



Benefits

- Reduction in response time between information analysis and action
- Everyone has access to a single source of information using familiar Microsoft Excel
- Reduced time between data collection and data analysis
- More flexible and personal information searching

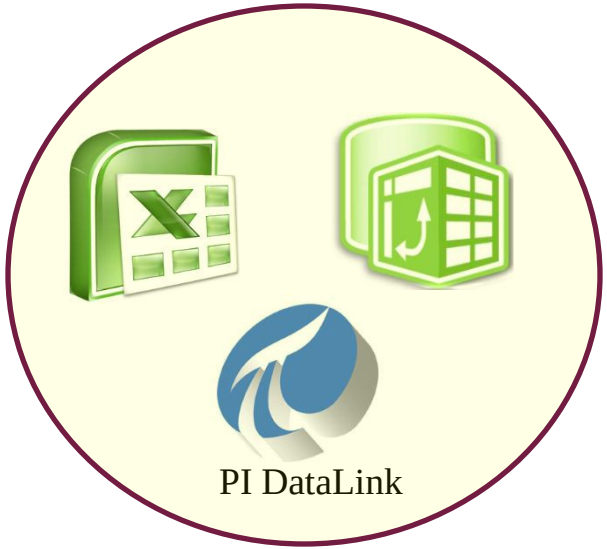
Savings

Target $4.7 million annual savings via a 1 day increase in asset availability.

Business Intelligence Explained

- Better decisions through data
- Monetize you PI System data

Tools to recognize …



SAP

IBM

Business Objects

COGNOS
AN IBM COMPANY

Microsoft SQL Server 2008

ORACLE
BUSINESS INTELLIGENCE

MicroStrategy
Best In Business Intelligence

Personal

Enterprise

PI DataLink and PowerPivot

PI DataLink

Best for Targeted Questions

What was the maximum temperature of the reactor over last 4 hours?

PowerPivot

Best for Discovery

Which of my reactors had the most temperature exceptions in the past month?

PI DataLink and PowerPivot

PI DataLink

Best for set format reports

How much was produced yesterday?

How much was produced last month?

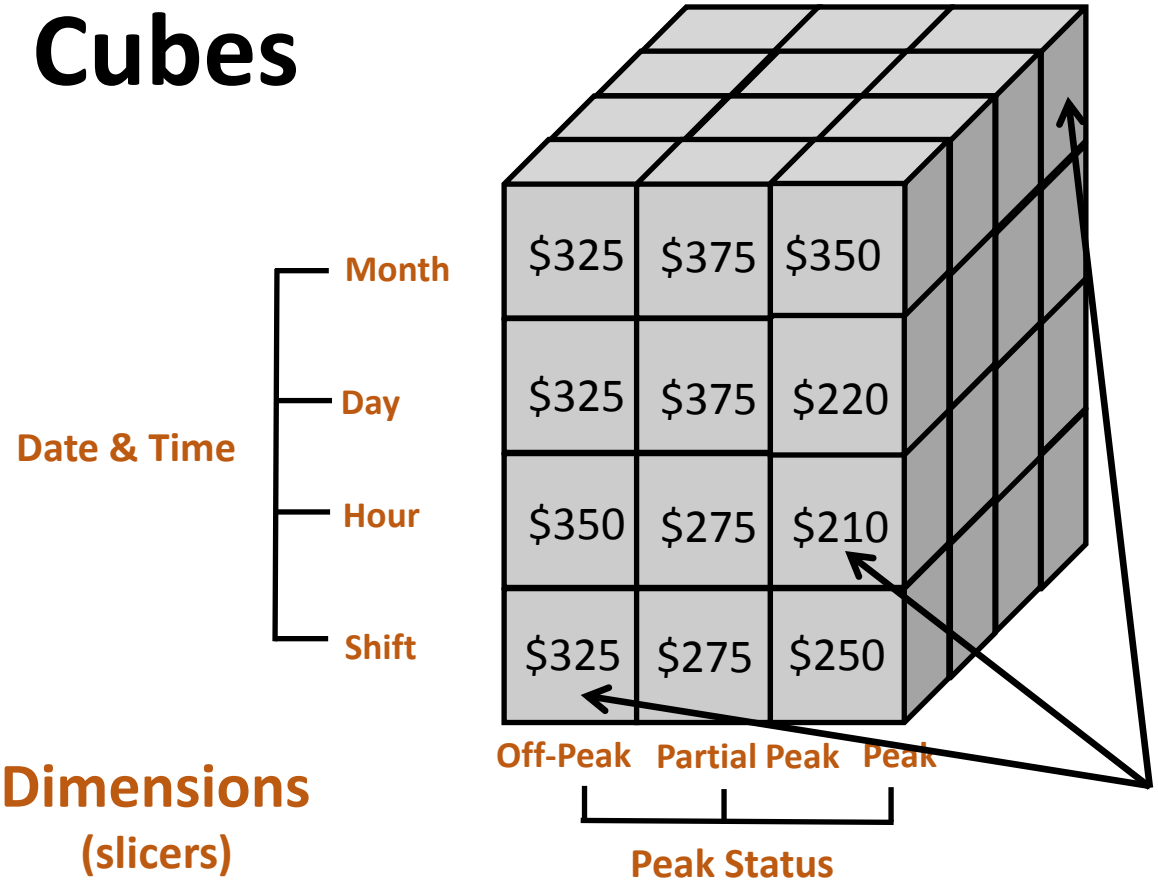
PowerPivot

Best for ad-hoc reports

What happens to my production when I … ?

What is the total production for all wind & hydro assets in the northern region in July?

Cubes



Dimensions
(slicers)

Facts

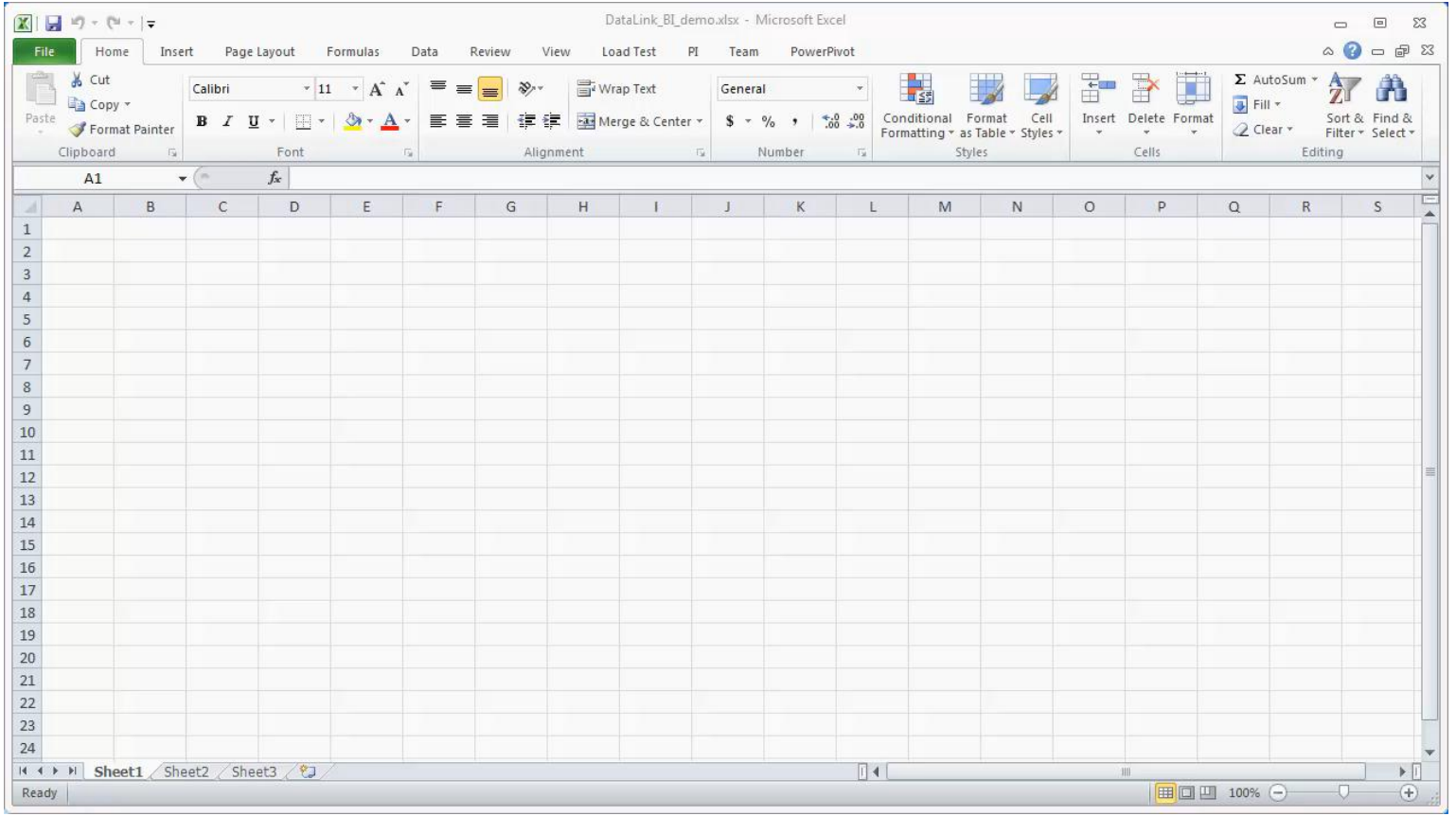
Show me the total energy cost

For the first shift

During Peak Status

Demonstration

1. PI DataLink & PI AF
2. Create Excel Tables
3. Link Table to PowerPivot instance



Demonstration

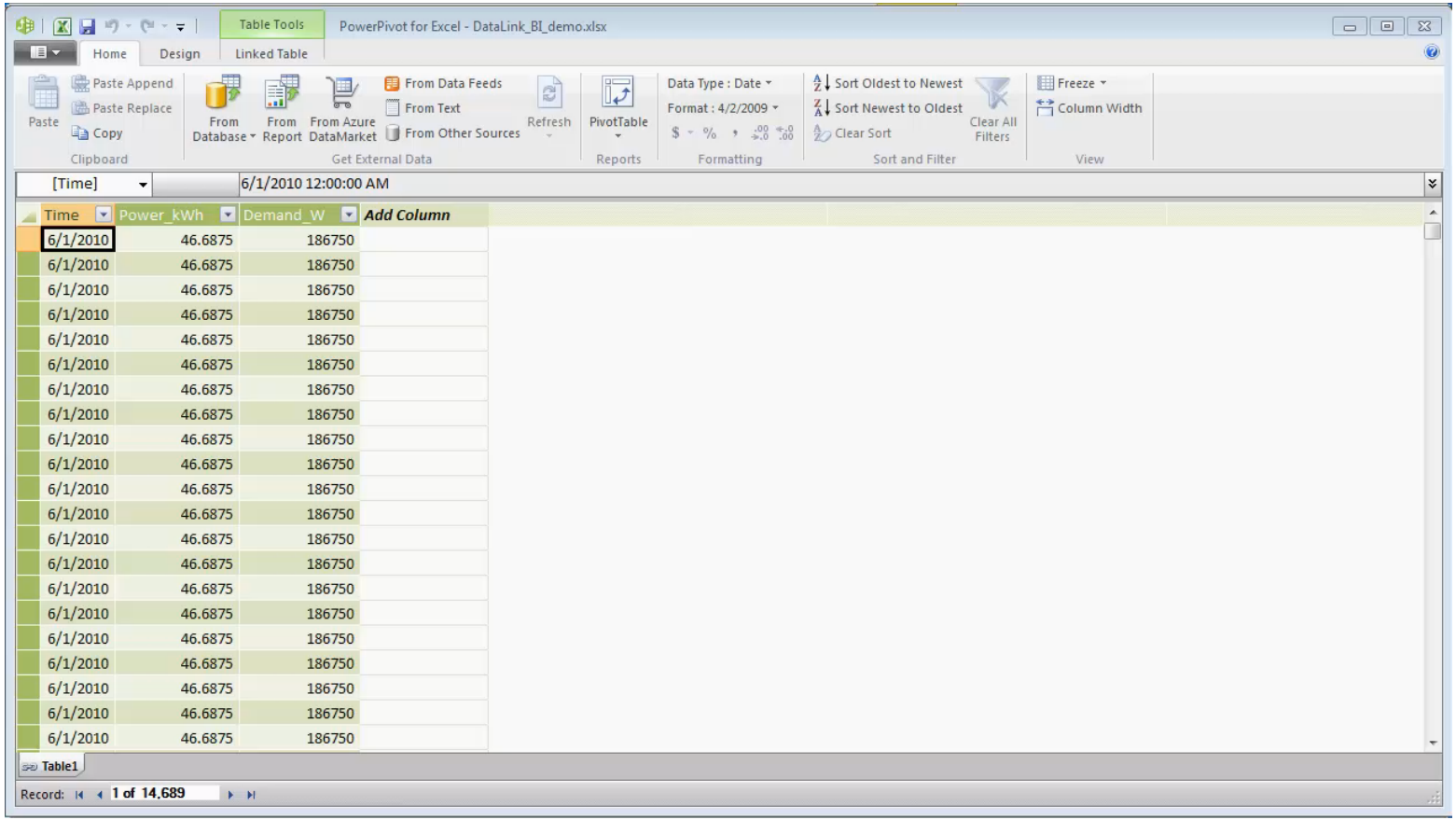
1. Use a simple DAX Expression

Data Analysis Expressions (DAX)

PowerPivot functions that operate on columns to do things like:

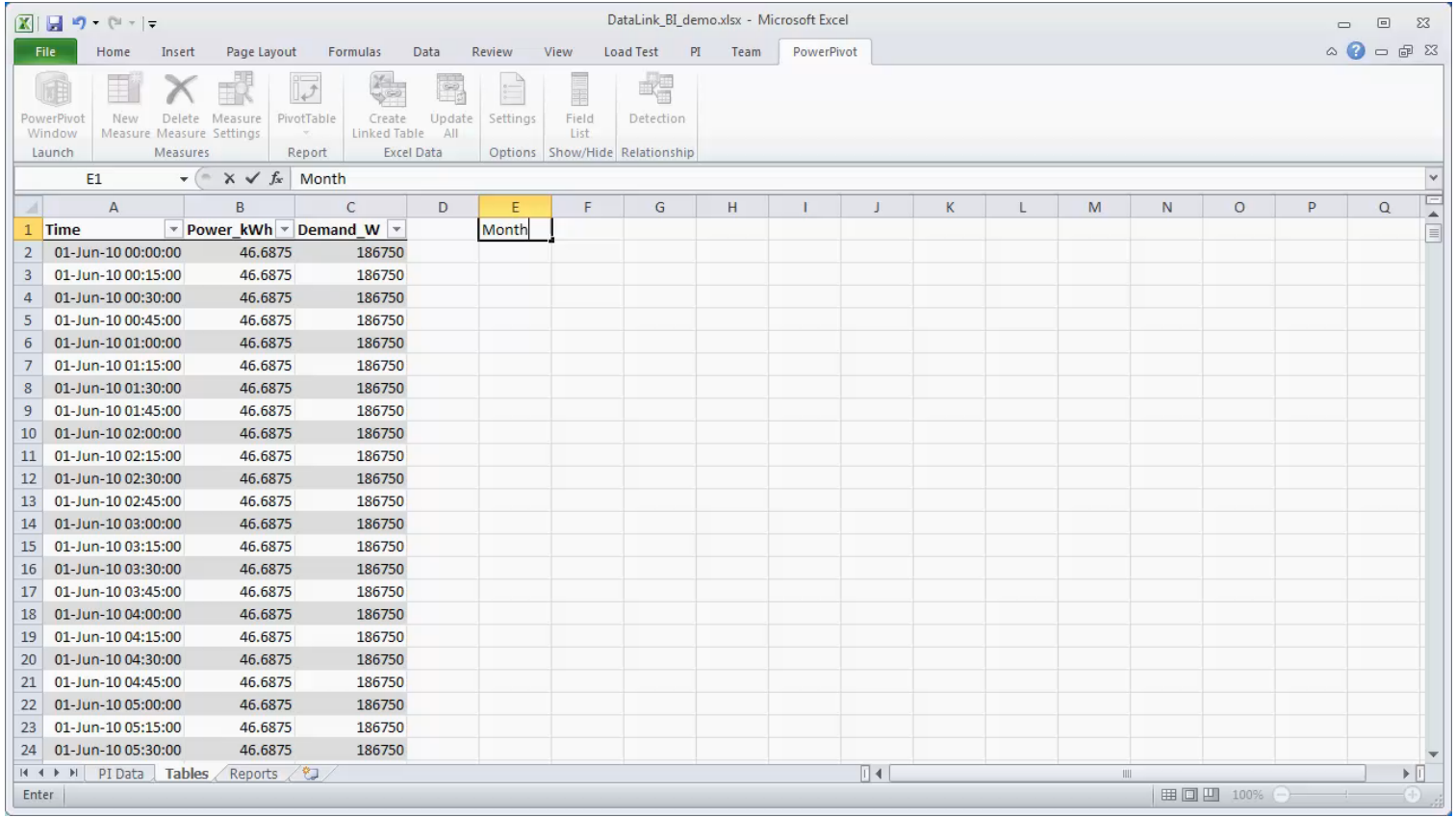
1) Column arithmetic – AVERAGE, MIN, MAX, SUM, etc
2) Relate columns – RELATED, RELATEDTABLE
3) Functions with the A suffix handle text
4) Functions with the X suffix operate on tables
5) Error Handling – IF, IFERROR, ISBLANK, ISNUMBER

… AND much more



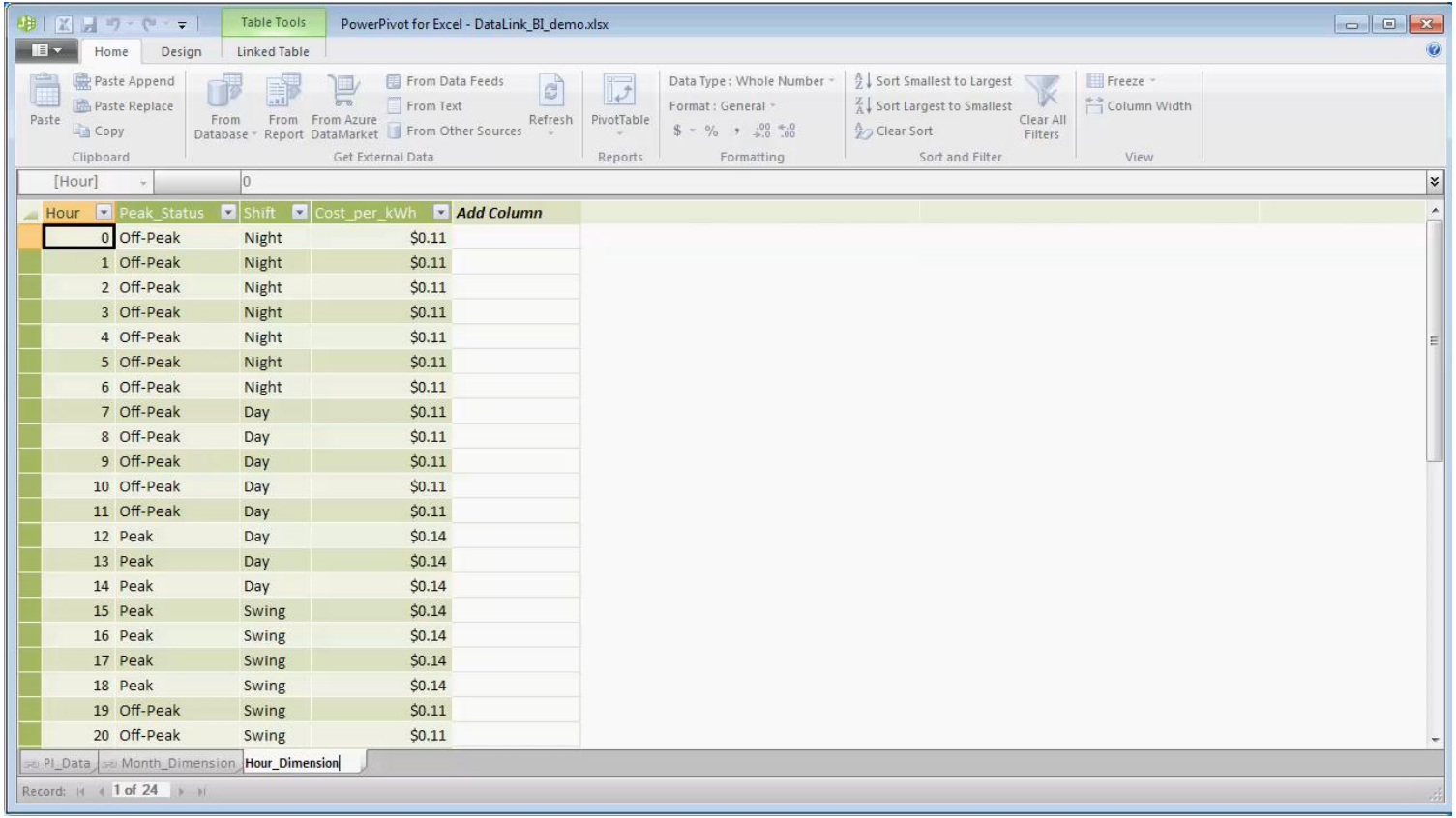
Demonstration

1. Create a Month dimension
2. Create a report of Power Usage by Month
3. Show Value summary calculation modes



Demonstration

1. Create Hour Dimension with Rate Table
2. Create a new Relationship
3. Show Related DAX expression
4. Create Cost by Month + Shift Report



Call to Action

Download PowerPivot for Excel 2010 today

- http://www.powerpivot.com/

Join the discussion

- http://vcampus.osisoft.com/
  - Building a BI Infrastructure
  - Personal BI with PI DataLink and Office 2010

Thank you

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