

FastCast[®] Ultra-Fast Forecast Model Comparison

Frame-by-frame real-time graphical and numerical presentation of the actual and change in forecast (ECMWF and GFS forecast models). Updated as each time step of the model is released.

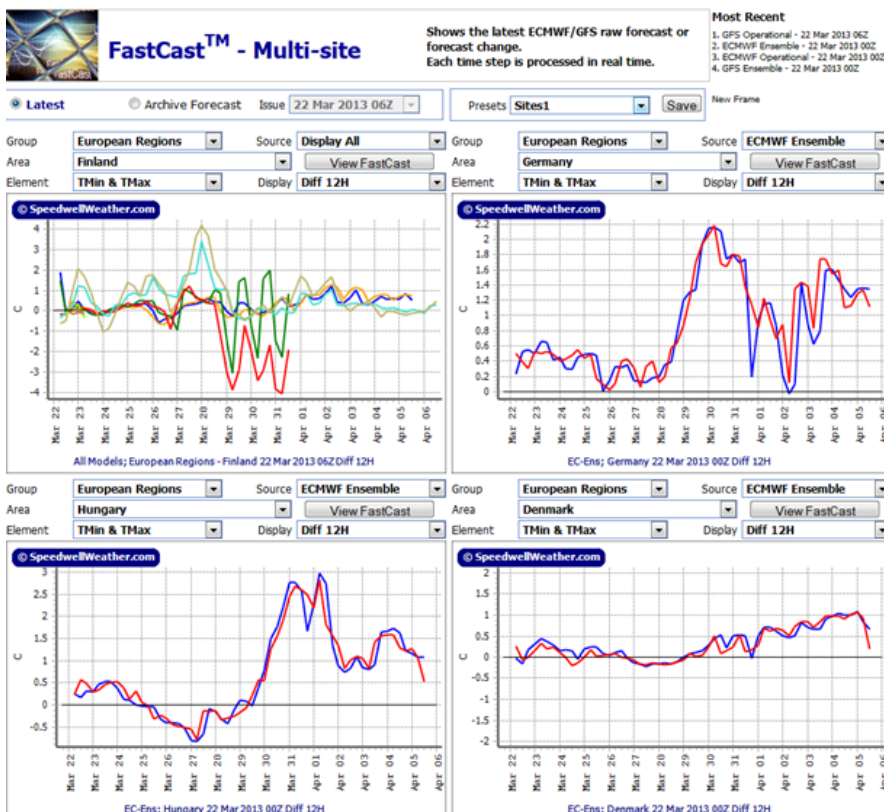
Speed, Speed, Speed,...

The proximity of Speedwell's London office to ECMWF coupled with streamlined model processing on dedicated servers results in fast delivery of ECMWF forecast changes to the market. Client feedback indicates that we are usually ahead of the competition.

The FastCast product has been designed with input from traders. The goal is to present the information rapidly and in a straightforward manner: "warmer or colder...?"

Station Forecasts or Regions

Station forecasts are based upon the model forecast for a particular point on the earth. Regional forecasts combine model outputs within a given geographical area. Regional forecasts include US power regions and European countries.



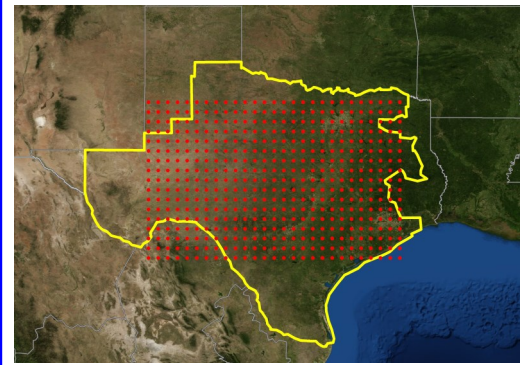
View Multiple forecast change graphs showing each frame as it arrives in real time. The user can configure and save multiple views choosing eg 12 hour forecast change for four sites or showing the changes in GFS/ECMWF models for a single site

Environmental Finance 2015 Annual Market Rankings Winner

Winner of the best Global Weather Risk Management Advisory / Data Service for

Regional Analysis

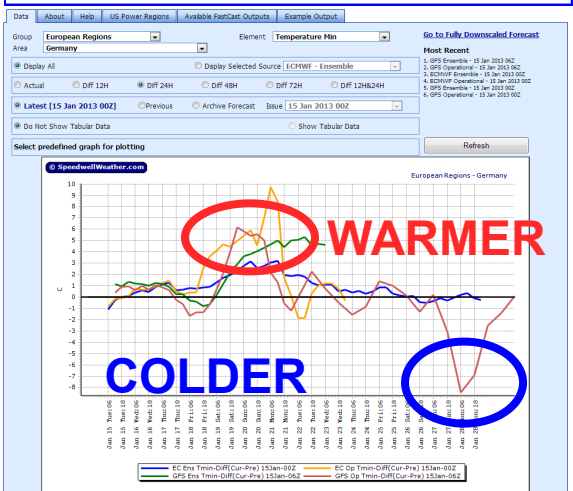
Regional analysis (such as the USA ERCOT region shown below) use a basket of forecast grid points located within a given area.



View the difference between successive model runs or previous runs: Diff 6hr (for GFS only), Diff 12hr, Diff 24hr, Diff 48hr, Diff 72hr

Rapid Updates

The FastCast graph updates automatically as each time step becomes available, frame by frame.



View the differences: ECMWF operational and/or ECMWF ensemble and/or GFS Ensemble and/or GFS Operational, TMax, TMin, TAvG, or Precipitation.

Speedwell FastCast® Forecast Model Comparison

Available Stations & Regions

European Regions

| | | |
|-------------|----------------|---------|
| Austria | Czech Republic | Denmark |
| Finland | France | Germany |
| Greece | Hungary | Ireland |
| Netherlands | Norway | Poland |
| Romania | Slovakia | Spain |
| Sweden | Switzerland | UK |

Specific Sites in European countries

> 100 sites in the following countries:

| | | |
|-------------|----------------|---------|
| Austria | Czech Republic | Denmark |
| Finland | France | Germany |
| Greece | Hungary | Ireland |
| Netherlands | Norway | Poland |
| Romania | Slovakia | Spain |
| Sweden | Switzerland | UK |

USA: NERC Power Regions in the USA

| | | |
|-------|------|------|
| ERCOT | MAPP | NWPP |
| SERC | MAIN | CAMX |
| FRCC | ECAR | NEWE |
| SPP | MAAC | |
| AZNM | NYPP | |

Specific Sites in the USA

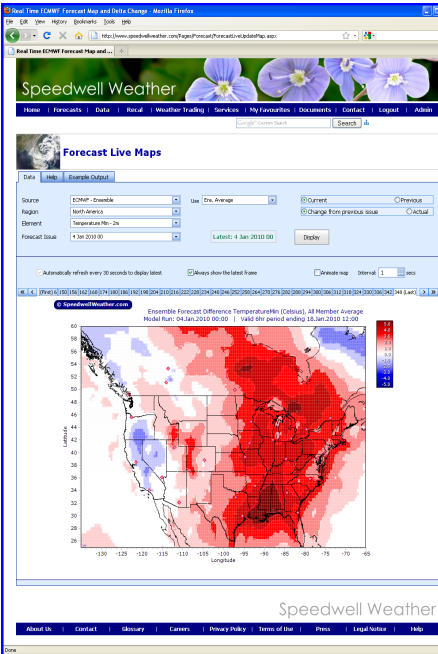
> 100 sites in all states

CME Weather Contracts Site Packs

| | |
|--------------|----------------|
| U.S. CME | Euro- |
| European CME | Australian CME |
| Canadian CME | |



To Complement the FastCast charts, tables and maps are also available: The maps show absolute and forecast change for the Ensemble (average and member 1) as well as the Operational products. The tables present numerically the same information as shown on the FastCast graphs.

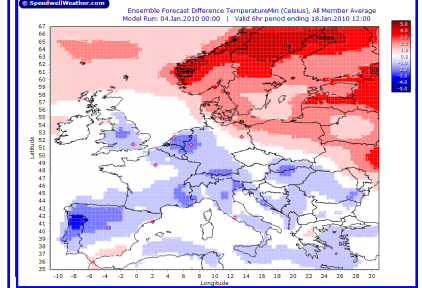


Summary Table

| Run Date | Time | Temp | Wind | Pressure | Clouds | Wet | Wet | Wet | Wet | Wet | Wet | Wet | Wet | Wet | Wet | Wet | Wet | Wet | Wet |
|-------------|-------|------|------|----------|--------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 18-Jan-2010 | 12:00 | 62.4 | 11.2 | 70.9 | 0.7 | 0.4 | 1.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

Download Excel Forecast

| Forecast Date | Temp | Wind | Pressure | Clouds | Wet | Wet | Wet | Wet | Wet | Wet | Wet | Wet | Wet | Wet | Wet | Wet | Wet | Wet | Wet |
|---------------|------|------|----------|--------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 18-Jan-2010 | 62.4 | 11.2 | 70.9 | 0.7 | 0.4 | 1.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |



| Forecast Value | Date Time GMT | | 24 Jan | 25 Jan | 26 Jan | 27 Jan | 28 Jan | 29 Jan | 30 Jan | 31 Jan | 01 Feb | 02 Feb | 03 Feb | 04 Feb | 05 Feb | 06 Feb | Grand Total |
|--|---------------|-------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-------------|
| Atlanta-Hartsfield International Airport | United States | 72219 13874 | 1.6 | -0.8 | 3.7 | -5.0 | -7.1 | 0.2 | 0.2 | -1.4 | 1.1 | 2.5 | 1.3 | 1.4 | -1.8 | -0.8 | -4.8 |
| Baltimore-Washington International Airport | United States | 72406 93721 | -2.3 | -1.0 | 0.6 | -0.2 | -3.1 | 1.0 | 0.8 | 0.5 | -0.5 | 2.4 | 1.1 | 1.6 | -0.8 | -0.3 | -0.2 |
| Boston-Logan International Airport | United States | 72509 14739 | -2.8 | -0.9 | 2.3 | 1.1 | -1.9 | -1.6 | 0.6 | -0.8 | -2.1 | -0.5 | -0.8 | 0.5 | -1.0 | -0.1 | -8.2 |
| Chicago O'Hare International Airport | United States | 72530 94846 | 1.2 | -0.2 | 0.1 | 1.8 | 1.0 | 0.8 | 3.3 | 1.7 | 3.0 | 0.7 | 2.9 | 1.2 | 0.4 | 1.5 | 19.5 |
| Cincinnati-Northern Kentucky International Airport | United States | 72421 93814 | -0.7 | -0.4 | -0.2 | -1.5 | -1.1 | 0.0 | 0.5 | 1.8 | 3.5 | 0.6 | 2.2 | 0.4 | -0.4 | 1.4 | 6.0 |
| Colorado Springs Municipal Airport | United States | 72466 93037 | -1.0 | 0.2 | 0.0 | -0.2 | 0.0 | 1.2 | 0.2 | 0.2 | -1.4 | 0.3 | 0.0 | -0.7 | 0.2 | -0.3 | -1.3 |
| Dallas-Fort Worth | United States | 72466 93037 | -1.0 | 0.2 | 0.0 | -0.2 | 0.0 | 1.2 | 0.2 | 0.2 | -1.4 | 0.3 | 0.0 | -0.7 | 0.2 | -0.3 | -1.3 |

See the evolution of the forecast or forecast change frame by frame.

The FastCast Grid updates MULTIPLE sites showing the change in daily TMin and TMax as each day becomes available. The table fills from left to right in real time.

| Forecast Value | Date Time GMT | | 24 Jan | 25 Jan | 26 Jan | 27 Jan | 28 Jan | 29 Jan | 30 Jan | 31 Jan | 01 Feb | 02 Feb | 03 Feb | 04 Feb | 05 Feb | 06 Feb | Grand Total |
|----------------|----------------|--|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-------------|
| Austria | Austria | | 0.3 | 0.4 | -0.5 | 0.0 | 1.2 | 0.3 | 0.4 | 0.6 | 0.9 | 0.7 | 0.8 | 0.1 | 0.3 | 0.5 | 5.9 |
| Czech Republic | Czech Republic | | 0.2 | 0.1 | 0.7 | 0.7 | 1.1 | 1.0 | 0.8 | 0.8 | 0.2 | -0.8 | -1.1 | -1.4 | -1.2 | -1.3 | -0.2 |
| Denmark | Denmark | | 0.1 | -0.2 | -0.1 | -0.7 | 0.2 | 0.2 | 0.2 | 0.0 | -0.3 | -0.9 | -1.7 | -1.9 | -1.8 | -1.9 | -8.8 |
| Finland | Finland | | 0.3 | 0.4 | 0.5 | 0.5 | -0.5 | -1.4 | -3.6 | -5.1 | -5.9 | -5.2 | -3.7 | -2.7 | -2.2 | -2.3 | -30.9 |
| France | France | | 0.2 | 1.4 | 1.0 | 0.6 | -0.7 | -0.6 | 0.3 | 0.6 | -0.1 | 0.0 | 0.4 | 0.3 | 0.1 | 0.1 | 2.5 |
| Germany | Germany | | 0.0 | -0.2 | -1.2 | 0.0 | 0.5 | 0.4 | 0.5 | 0.4 | -0.5 | -0.8 | -1.0 | -1.0 | -1.2 | -1.7 | -5.8 |
| Greece | Greece | | 0.9 | 0.7 | 0.5 | 0.3 | 0.1 | 0.6 | 0.7 | 0.5 | 0.2 | 0.5 | 0.0 | -0.2 | -0.4 | -0.5 | 3.9 |
| Hungary | Hungary | | 0.5 | 0.8 | 0.7 | 0.7 | 0.6 | 0.6 | 0.3 | 1.1 | 0.6 | -0.4 | -0.9 | -0.8 | -0.5 | -0.7 | 2.6 |
| Ireland | Ireland | | 1.5 | 0.1 | 0.2 | 0.2 | 0.6 | 1.1 | 0.3 | -0.1 | -0.4 | -0.5 | -0.5 | -0.2 | -0.8 | -0.3 | 1.3 |
| Netherlands | Netherlands | | 0.0 | -0.7 | -0.4 | 0.2 | 0.5 | 0.6 | 0.7 | 0.1 | -0.8 | -0.8 | -0.9 | -1.7 | -1.2 | -1.5 | -5.3 |

The FastCast Grid can show specific sites or regions.