ActionDR Case Study
United Energy

Automated Demand Response with >30% Peak Load Shift

ABOUT UNITED ENERGY

UE is electricity distributor that owns, operates and maintains the distribution network in its service area.

Ownership | 66% DUET Group; 34% SGSP (Australia) Assets Pty Ltd.

Headquarters | Mt Waverly, Victoria, Australia

Employees | 350

Customers | 640,000

CUSTOMER CHALLENGE

United Energy (UE) is a leading Australian utility company that owns, operates, and maintains a distribution network supplying energy to more than 640,000 customers in its service territory. During the summer months, UE strives to reduce peak load amongst their residential customers, but identifying cost-effective, scalable Demand Response methods to manage these events have proven to be a challenge. UE has previously trialled residential Demand Response programs where customers were notified of peak event times by email and SMS and they were rewarded for reducing energy use during these peak events.

UE sought an automated residential Demand Response solution that would provide the required peak-load shifting to avoid costly energy spikes, but be scalable and cost-effective to implement.

HOMEBEAT SOLUTION

After evaluating a number of options, UE selected the Bidgely HomeBeat app with its Demand Response function for the 2015-2016 Summer Trial. HomeBeat leverages the Bidgely insights platform to analyse both home-area-network (HAN) and AMI smart meter data streams to disaggregate and identify usage patterns for specific appliances.

Specific to Demand Response, UE utilized the **HomeBeat ActionDR** solution, an engaging in-app function that communicates all DR event messages via mobile push and email notifications. The ActionDR solution employed key capabilities that leverage Bidgely's mobile engagement platform:

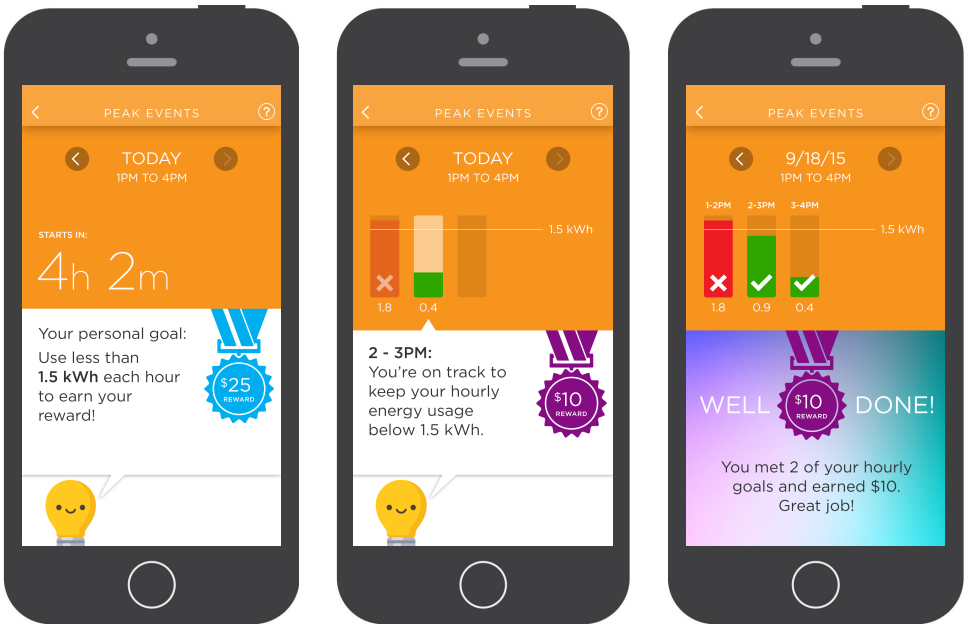
Gamification | Based on historic home efficiency data, each home was provided with an individualized energy use goal for each peak event period

Real-Time Feedback | For homes equipped with high-resolution HAN devices, ActionDR provided real-time updates on how well the customer was meeting their energy use goal

Performance-Based Incentives | For homes equipped with high-resolution HAN devices, ActionDR showed the reward/ incentive received as the consumer met each hour of their energy use goal, thereby keeping them engaged and motivated

ACTIONDR: HOW IT WORKS

Pre-Event → **In-Event** → **Post-Event**



- Email & in-app notifications
- Countdown timer
- Goal setting

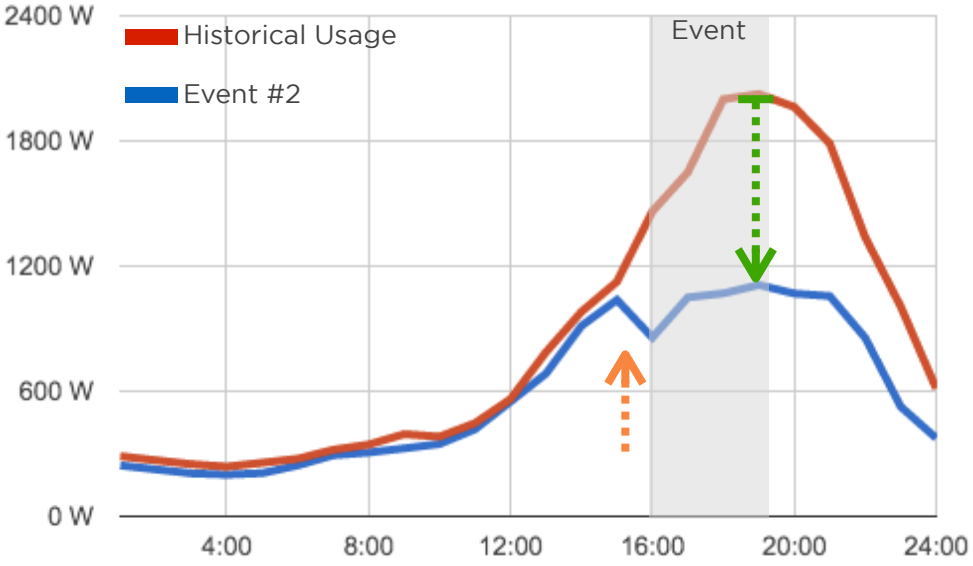
- Real-time feedback (HAN)
- Dynamic rewards based on event performance

- Real-time award confirmation (HAN)
- Historical context & event tracking

ACTIONDR: RESULTS

UE held four events during the 2015-2016 Summer season, targeting peak usage from 4-7pm. The trial achieved an ***average peak load shift of >30% per user per event***.

What Does an ActionDR Peak Shift Look Like?

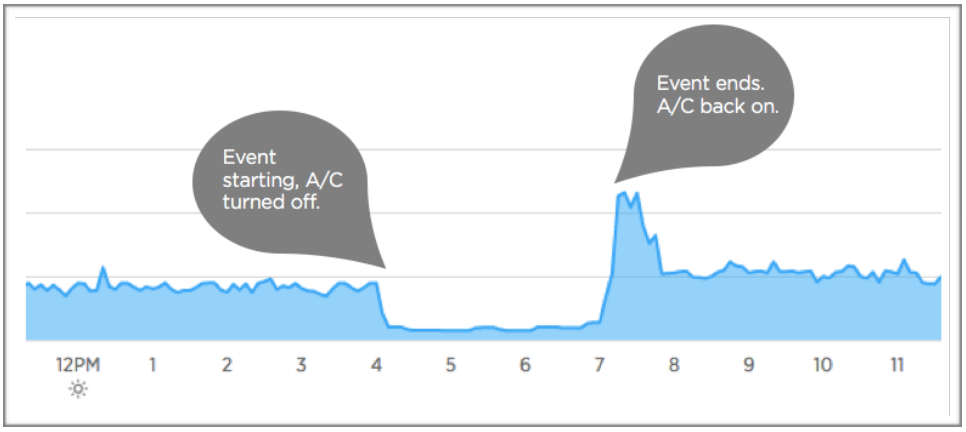


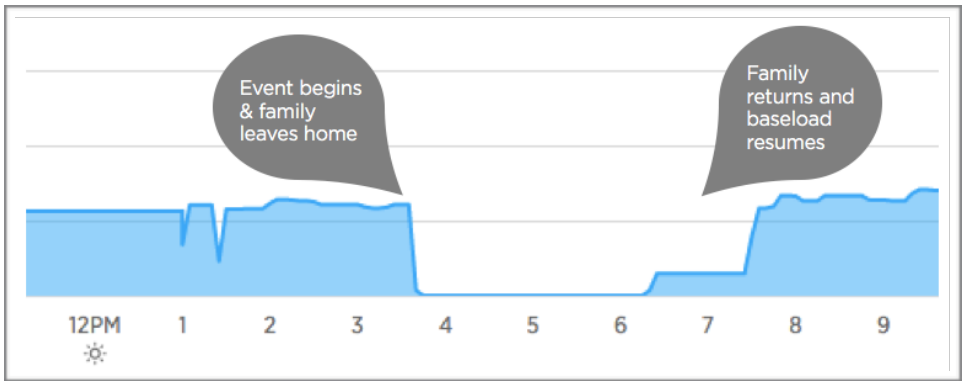
EVENT #2 ENERGY SHIFT

As shown in the chart on the right, the **green arrow** outlines the peak usage shift during event #2 (a reduction of about 30%).

Further, the **orange arrow** points out how effective the ActionDR product is at communicating with end users: note the clear break from historical trend just at the point of the event - all because the pre-event messaging resonated with the users.

How Do Users React to ActionDR?





ACTIONDR KEY BENEFITS

Timely engagement

Low customer investment

High scalability

Direct communications channel

CONCLUSION

United Energy is an example of a forward-thinking utility that wasn't satisfied with the traditional Demand Response methods they had tried. Recognizing the opportunity for improvement, they decided to supplement their existing DR trial program with a new approach, and chose Bidgely as their partner. By utilizing the HomeBeat app and ActionDR solution, UE was able to leverage appliance disaggregation, gamification, and timely notifications to engage their customers around key peak-load shifting events, while improving customer engagement and satisfaction.