



# Practical actions and management tools for the CRC Energy Efficiency Scheme

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# Actions and Tools for CRC

- **Action - Forecasting How many Carbon Allowances should you buy?**
  - Forward projections are essential in deciding on your carbon purchase and energy efficiency strategy to optimise CRC league table position
- **Action - What energy efficiency measures should you implement?**
- **How can M&T Tools help me?**
  - M&T data provides the vital clues to future energy use with:
    - Can detail accurate AMR data that you don't get from bills or manual reads
    - Detailed consumption information and trends
  - Reporting Requirements
  - Evidence Pack



# Actions – CRC Forecasting

- A **Forecast** is a statement of what is expected to happen in the future
  - Many different types of forecasting methodologies
    - **Time based** - using historical data
    - **Causal** - using driving factors e.g. weather or production
    - **Judgmental** - using “your gut”, scenarios and probability
    - Plus: AI, Simulation, Reference Class Forecasting
- **Risk** and uncertainty are central to forecasting and prediction
- **So.... How many Carbon Allowances should you buy?**

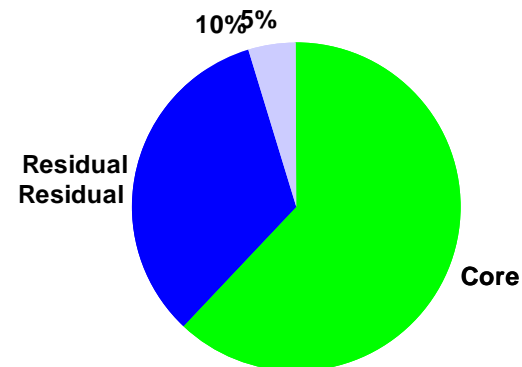




# Actions – What’s in...?

- **Step 1: What is included?**
  - You need to know 100% before you can start to exclude anything:
    - Portfolio records - what are your supplies? - M&T database
    - Do you have data for 100% of your carbon emissions? - M&T database
    - Use all your data sources: Utility Bills, Half-hourly data (from AMR), Supplier Statements? - M&T database
  - Take out any “domestic accommodation” and “transport”
  - Set your “core” emissions
  - Add in “residuals” emissions
- **How do you decide what to exclude?**

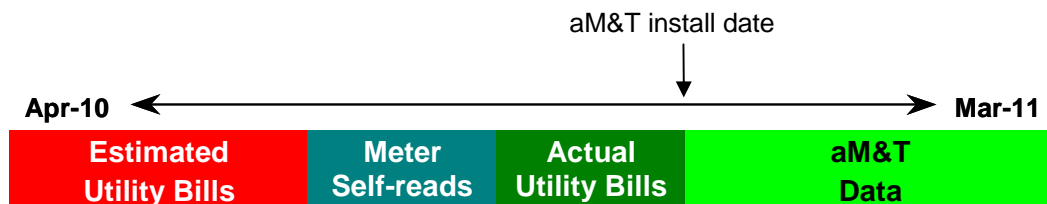
10% or 7% or 5%...





# Actions – Data quality...?

- **Step 2: How healthy is your data?**
  - Estimated Data
    - Remember 10% emissions penalty for >6 months estimates
- **How can M&T Tools help me?**
  - Using M&T tools data validation is fast
    - M&T tools make this simple
  - Combine data sources to build the healthiest data set
    - Make use of your AMR aM&T data from day one





# Actions – Forecasting how much...?

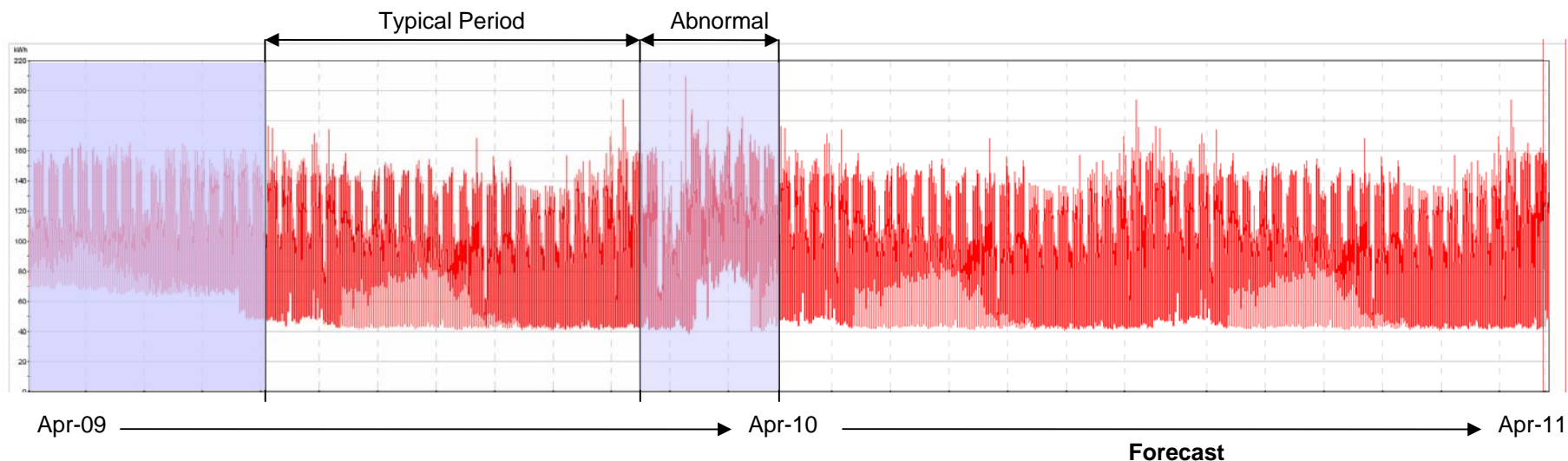
- **Step 3:** Calculating your basic emissions forecast
- Forecast methodologies:
  - **Time based** - using historical data
  - **Causal** - using driving factors e.g. weather or production
  - **Judgmental** - using “your gut”, scenarios and probability
  - Plus: AI, Simulation, Reference Class Forecasting
- **How can M&T Tools help me?**
  - Detailed consumption information and trends
  - Forecasting at supply level





# Actions – Forecasting how much...?

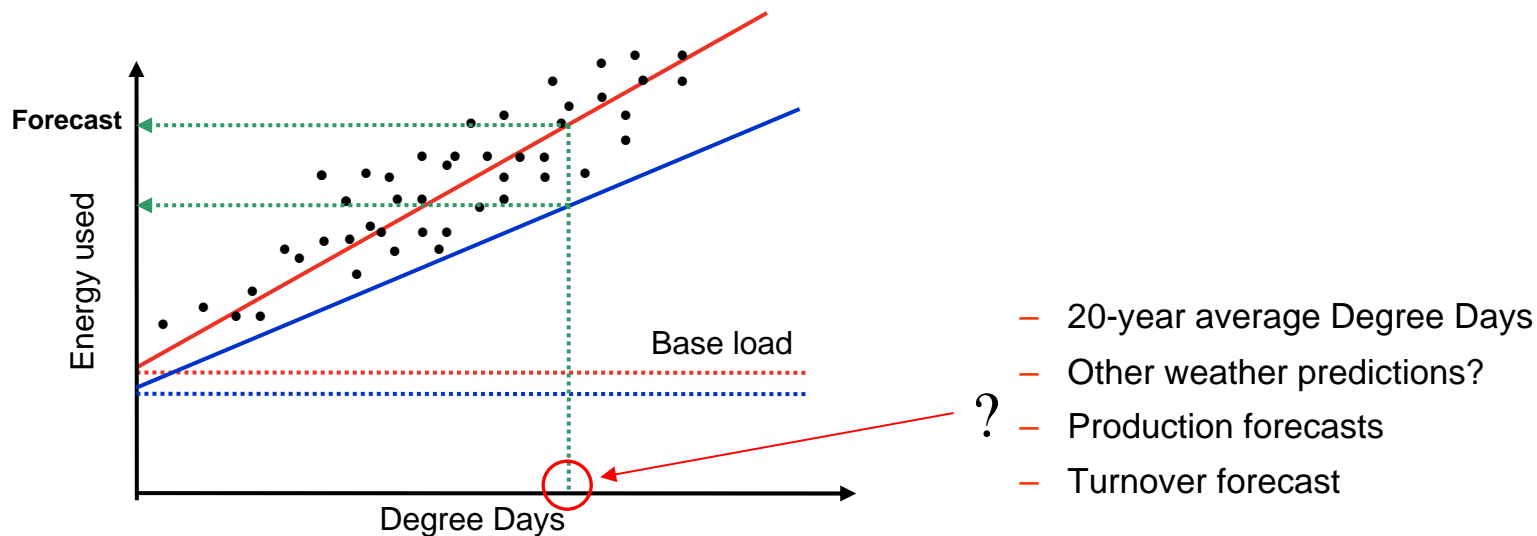
- **Time based** - using historical data
  - Build your healthiest data set then:
    - Use last years consumption
    - Select a typical usage period





# Actions – Forecasting how much...?

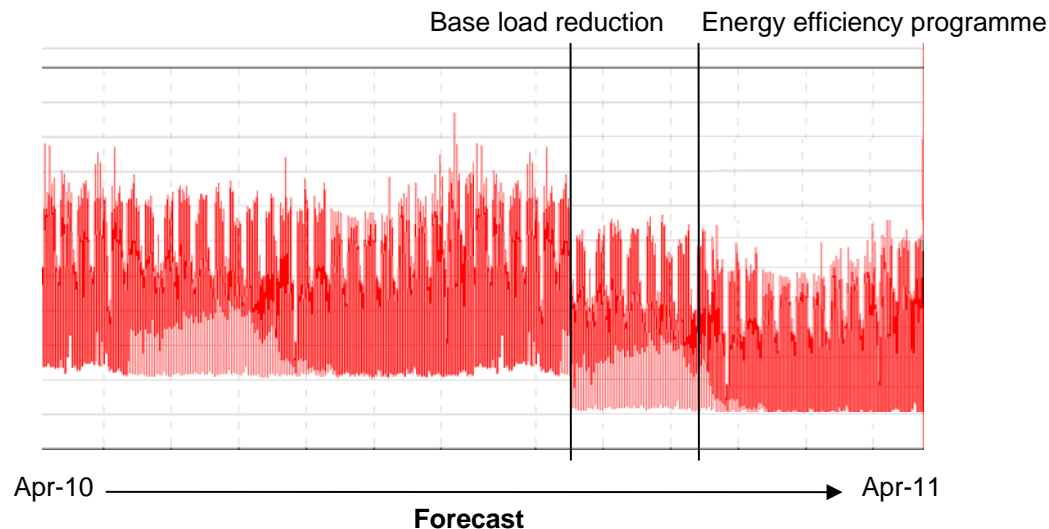
- **Causal** - using driving factors e.g. weather or production
  - Built your healthiest data set then (using historical data)
    - Calculate the Performance Line plus a driving factor
    - What data do you use for your driving factor to create your forecast?
    - What about improvements to the performance?





# Actions – Forecasting how much...?

- **Judgmental** - using “your gut”, scenarios and probability
  - A typical scenario would be a plan reduce emissions by 10% year on year
  - From a reduction in base load & overall energy efficiency programme
  - Each have different effective from dates





## Actions – Forecasting how much...?

- Forecasting should be a combination of the different methodologies
  - **Time based, Causal and Judgemental**
- Build up a basic emissions forecast on supply basis
- Then you can aggregate to site level and total up for your overall emissions forecast
- However can you be sure your forecast is right?



## Actions – CRC risks...?

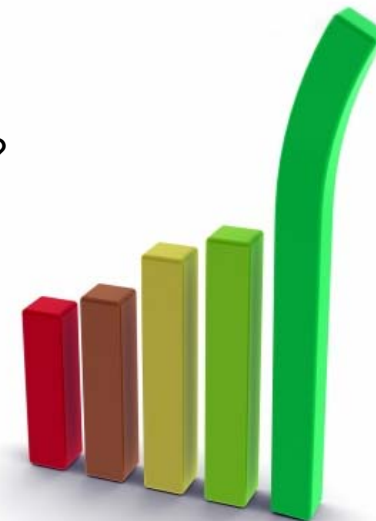
- **Step 4:** Adding risk to your basic emissions forecast
- Your **CRC Risk Management Strategy**
  - **Identification** - What are the risk sources?
    - Things that can change the outcome of your basic emissions forecast
    - Internal and external sources
  - **Assessment** - What are the events associated with the identified risks?
    - How much will it change your basic emissions forecast by?
    - What is the likelihood of occurrence?
    - What is the potential financial impact?
  - **Plan** - What are you going to do about it?
    - Avoidance
    - Reduction
    - Sharing
    - Retention





## Actions – CRC risks...?

- **Identification** - What are the risk sources?
  - Abnormal energy demand
    - **Causal** forecasting
  - Data quality
    - M&T tools and data can help
    - **Time based** forecasting
  - Cost of Carbon Allowances
    - £12 per Tonne for CRC Introductory Phase
    - What about top-up purchases and Phase 2 auctions?
  - Business risks
    - Things going on in your organisation out of your control





## Actions – CRC risks...?

- **Assessment** - CRC League Table Position & Financial Risk
  - e.g. 35,000TCO<sub>2</sub> in Footprint Year and a 10% year-on-year savings

+£632k



-£674k



## Actions – CRC risks...?

- **Plan Your Actions** - What are you going to do about it?
  - Avoidance
    - Don't include it in CRC (up to 10% of your emissions)
      - One Answer to: **How do you decide what to exclude?**
  - Reduction or "optimisation"
    - Reducing the severity or likelihood of the impact from occurring
    - e.g. M&T data is fundamental to managing your energy usage and therefore reducing the risk
  - Sharing
    - Passing CRC costs down to site level to incentivise adherence to targets and participation
  - Retention
    - All risks that are not avoided or transferred are retained by default
    - Understanding and quantifying them is important





## Actions - CRC Carbon Allowances

- **So... How many Carbon Allowances should you buy?**
- Depends upon:
  - What you exclude – up to 10% of your CRC emissions
  - Basic forecast emissions
  - Organisation's attitude to risk
  - Risk Management Strategy
  - Budget!
- Tracking is key
- Adjust forecasts regularly
- Use M&T tools and data to refine forecasts using all methodologies





# Action - Energy Saving Projects

- **What energy efficiency measures should you implement?**
- Good “old fashioned” M&T using M&T Tools to identify projects
  - Benchmarking
  - Performance monitoring
  - Exceptions
  - Energy surveys
- Cost of Carbon in a business case
- Feedback to forecast and risk models





# CRC Management Tools

- **DECC - Supply List Tool**
  - Excel based spreadsheet
  - Lists all your supplier, but must be added manually one at a time
  - Calculates data for reporting
- **TEAM Sigma CRC Software**
  - Comprehensive tools built around your core M&T database to help you comply with the CRC Energy Efficiency Scheme
  - Evidence Pack data store





# TEAM Sigma CRC Software

- Manages all supplies included in a CRC Phase
- Easy to use set-up wizards
- Pulls on data held in M&T Sigma database, however works on sub-set to allow normal bill validation and M&T processing to carry on without affecting CRC analysis
- Updates with latest data when needed
- There are a number of core functions:
  - Data Validation
  - Forecasting and Financial Risk
  - Allowance Purchase and Monitoring





# Actions and Tools for CRC

- **Action - How many Carbon Allowances should you buy?**
  - Forward projections are essential in deciding on your carbon purchase and energy efficiency strategy to optimise CRC league table position
- **CRC Management Tools can really help take hard work out of consolidating and validating data**



# Thank you

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