

- This slide is for information purpose only for the reader, not part of the presentation.
- This is all the information / data that was provided.
- 3 days notice to understand and create a presentation
- All logos of the company (XYZ) and product names (ABC) have been removed
- Please note that I have no prior knowledge about Alteryx, GMAP or Snowflake – so this was a blind presentation on the process
- I now know there is an error in my understanding of the software but I had limited time to learn all said software, but general steps & principles would remain the same just names of software would change.

#### Notes of following presentation & Data Provided

Presentation on how the revenue would be calculated based on a new product ABC. It is launching on the 31st October 2024 and relates only to Electricity, any dual fuel customers will pay a flat fee for Gas. A typical annual usage for electricity is 3.1MWh. The tariff works so that the first few MWh of a tariff used in a particular time period is free, then as the customer uses more energy, the cost of that energy increases in price  
A typical annual usage for Gas is 12MWh . Using GMAP and Snowflake

	ELECTRICITY
DAILY STANDING CHARGE	£0.5867
FIRST 5KWh of a Day	£0.0000
SECOND 5KWh of a Day	£0.2244
THIRD 5KWh of a Day	£0.4488
ALL EXTRA KWh each day	£0.8976

# ABC: Gas & Electricity Monthly Revenue Model

Welcome to our presentation on XYZ's innovative ABC tariff. We'll explore the projected monthly revenue for this new product, launching on 31st October 2024. Our analysis covers both gas and electricity components, with a focus on the unique tiered pricing structure for electricity.

by Shilla Solanki



Afternoon, and innovative ABC tariff and explore the projected mwelcome to today's presentation. We're going to dive into XYZ's monthly revenue for this new product



The presentation outline is:

- 1. A Summary:** of the ABC tariff and its revenue model.
- 2. An Overview:** legal considerations, and regulations
- 3. Findings:** A detailed breakdown of revenue calculations for both gas and electricity.
- 4. Next Steps:** The implementation plan and future refinements using GMAP and SnowFlake.
- 5. Q & A:** to address any queries.

# Presentation Outline



## 1 Summary

Overview of the ABC tariff and its revenue model.

## 2 Overview

Key assumptions, legal considerations, and regulatory framework.

## 3 Findings

Detailed breakdown of revenue calculations for gas and electricity.

## 4 Next Steps

Implementation plan and future model refinements. GMAP & Alteryx

## 5 Q & A

So, a summary of the

### Key Features



## 1.ABC Tariff: Key Features



### Tiered Electricity Pricing

First few MWh are free, with increasing prices for higher usage.



### Flat Gas Rate

Dual fuel customers pay a consistent flat fee for gas.



### Launch Date

Went live on 31st October 2024.



### Individual Basis

Revenue projections are calculated per individual customer, not seasonally adjusted.

- **Electricity**

- where the first few megawatt-hours (MWh) of electricity are free,
- with increasing prices for higher usage.
- this may be designed to encourage energy efficiency and reward lower consumption.

- **Gas**

- there is a consistent flat fee for gas usage.
- this simplifies billing and offers predictable costs.

- **Launch Date:**

- went live in Oct, marking it an important milestone for XYZ.

- **Individual Basis:**

- means, revenue projections are calculated per customer,
- no seasonal, or any other adjustment have been made

## 2. Regulatory and Financial Considerations

### Regulatory Framework

- Energy Price Cap compliance (Qrt)
- Energy Prices Act 2022 adherence (A)
- Supplier Licensing requirements (A)
- Industry Codes and Standards alignment CACoP (Bi)

### Financial Aspects

- IFRS 15 revenue recognition standards (Qrt)
- Energy market competition analysis (Qrt)
- Environmental and social scheme obligations (Bi)
- Compliance and enforcement cost considerations (A)

#### Regulatory and financial considerations:

The highlighted items are for immediate consideration to ensure that they are maintained on a regular quarterly basis. The others should already be embedded into the company processes and reviewed as necessary.

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Back Up Notes:

**Energy Price Cap** Ofgem initiative to ensure consumer protection.

**Energy Prices Act 2022** This act provides the legislative framework to ensure that support measures, such as the Energy Price Guarantee and Energy Bill Relief Scheme, are passed through to end users, including businesses and domestic consumers. and tariff meets legal requirements

**Supplier Licensing** Energy suppliers must be licensed by Ofgem to operate in the UK. The licensing process includes meeting specific conditions to ensure fair treatment of consumers and compliance with industry standards

**Industry Codes and Standards** Ofgem oversees various industry codes and standards that govern the behaviour of energy companies. These include the Code Administrators Code of Practice (CACoP), which sets out the principles and standards for code governance

**Energy Market Competition** Ofgem promotes effective competition in the energy market to benefit consumers. This includes measures to encourage new entrants and facilitate switching between suppliers

**Environmental and Social Schemes** Ofgem administers various schemes aimed at promoting environmental sustainability and social welfare, such as support for installing heat pumps and improving energy efficiency in homes. These regulations and measures are designed to protect consumers, ensure fair pricing, and promote a cleaner, greener energy system in the UK.

**Compliance and Enforcement** Ofgem monitors company activities to ensure compliance with regulatory requirements. They have the authority to impose penalties or take other enforcement actions if companies breach their licenses or fail to meet regulatory standards

**IFRS 15 – Revenue recognition** – when or as the entity satisfies a performance obligation > this is a distinct service being delivered so no bundling of figures and should be identifiable / broken down.

-Allocating the transaction price, discounts and variable consideration to specific performance obligations if they relate entirely to one or more but not all performance obligations. ( usage is variable on actual consumption)

-Revenue is recognised as a Over Time : as the customer simultaneously receives and consumes the benefits as the entity performs (delivery of electricity)

-Challenges = estimating variable consideration – future energy prices, usage, potential penalties or bonuses from monitoring bodies.

For the Gas pricing  
Ofgem's energy price cap has been used  
This is valid till Dec 2024

Usage under Ofgem data  
would indicate 12mwh as, medium usage, typically 1 or 2  
people.

It is assumed that XYZ has approximately 10m gas  
customers, all on one tariff for this scenario.

Ofgem typical usage kwh

- Low # people 1-2 Gas = 7,500
- \*\*Medium # people 2-3 Gas = 11,500
- High # people 4- 5 Gas 17,000

Ofgem next update due on 25.11.2024 for the Q1 period  
of 2025.

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Back Up Notes:

Ofgem energy price cap level dates review:  
25 November 2024 – for Q1 period 1 January to 31 March  
2025  
25 February 2025 – for Q2 period 1 April 2025 to 30 June  
2025  
26 May 2025 – for Q3 period 1 July 2025 to 30 September  
2025



## 2. Gas Pricing Structure

Based on Ofgem Dec 2024 Cap

**£0.3166**

**Daily Standing Charge**

Fixed daily cost for gas connection.

**£0.0624**

**Flat Rate per kWh**

Consistent pricing for all gas usage.

**12,000**

**Typical Annual Usage (kWh)**

Average household consumption used  
for calculations.

**1,000**

**Average Monthly Usage (kWh)**

Basis for monthly revenue projections.

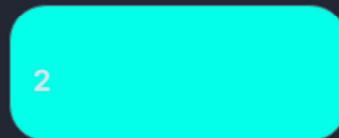
## 2. Electricity Tiered Pricing Structure



### First 5 kWh Daily

£0.00 per kWh - Free usage to encourage adoption.

Average usage per month =  
3.1 MWh / 3100KWh per year  
254.7KWh per month  
8.49 KWh per day



### Second 5 kWh Daily

£0.22 per kWh - Moderate pricing for average consumption.



### Third 5 kWh Daily

£0.45 per kWh - Higher rate for increased usage.



### All Extra kWh Daily

£0.90 per kWh - Premium rate for high consumption.

#### Average Usage:

- Annually: Average usage per year is 3.1 MWh (3100 kWh).
- Monthly: Average usage per month is 254.7 KWh.
- Daily: This translates to approximately 8.49 KWh per day.

Indicating that the first two tiers are the main price points.

For the presentation it is assumed that XYZ have 10m customers all on one tariff

- Under Ofgem's typical usage it would indicate that it 3.1Mwh are medium users of around 2-3 people.
- Low # people 1-2 Elec 1,800
- Medium # people 2-3 Elec 2,700
- High # people 4- 5 Elec 4,100

#### We will move on findings

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Back Up Notes:

ELECTRICITY (rounding)  
DAILY STANDING CHARGE £0.5867  
FIRST 5KWh of a Day £0.0000  
SECOND 5KWh of a Day £0.2244  
THIRD 5KWh of a Day £0.4488  
ALL EXTRA KWh each day £0.8976

## Gas Revenue Calculation Model

Would be a basic calculations.

### 3.Gas Revenue Calculation Model

- Assumption: flat rate, no growth, no Ofgem QTR cap changes
- Usage will vary by season country location, household size & type of heating system used.
- Formula: Per client & daily basis = Standing charge + (Flat fee \* Usage)

Standing Charge (SC)	Annual (SC) *365	Flat Fee per KWh	Average usage KWh	KWh Revenue	Total Est. Revenue	Customer base 10m
£0.3166	£115.559	£0.0624	12,000	£748.8	£864.359	£8,644 m

- The data assumes**

- a flat rate with no growth and no changes to the Ofgem QTR cap.
- & Uniform usage by season, location, household size, and type of heating system.

- Formula:**

- For the revenue formula is per client on a daily basis
- Which is a Standing charge + (Flat fee \* Usage).

- Revenue Breakdown:**

- Standing Charge (SC): £0.3166 per day.
- Annual SC (365 days): £115.559.
- Flat Fee per KWh: £0.0624.
- Average Annual Usage: 12,000 kWh.
- KWh Revenue: £748.8.
- Total Estimated Revenue per Customer: £864.359.
- Customer Base: Projected revenue for 10 million customers is £8,644 million.

To forecast total revenue,

I would use a best case, worst, and most likely, scenario analysis

With Key KPIs being :

- Daily kWh usage
- Daily Standing Charge
- Cost per kWh for different usage tiers in a range of plus or minus 5% or 10%

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Back Up Notes:

£8,643,590,000 - eight billion, six hundred forty-three million, five hundred ninety thousand

The table shows the daily electricity revenue calculation for a typical client over four days in November 2024.

Showing the daily calculations and cumulative revenue in the final column for the month.

I would expect the data to be aggregated on a daily basis per client & to show the calculation per tier.

This is to ensure alignment with IFRS 15 in that there is no bundling of figures.

*In this scenario the revenue is recognised as a "Over Time" as the customer simultaneously receives and consumes the benefits as the entity performs (delivery of electricity)*

### 3. Electricity Daily Revenue Calculation For Client x

Date	Daily	Daily	Rev for	Rev for	Rev for	Rev for	Total	Cumulative
	kWh	Standing	First	Second	Third	Extra	Daily	Total For
	Used	Charge	5kwh	5kwh	5kwh	5kwh	Rev (£)	the Month
		(£)	(£) 0	(£)	(£)	(£)		
		0.5868		0.2244	0.4488	0.8976		
01/11/24	7	0.59	0	0.45	0	0	1.04	1.04
02/11/24	15	0.59	0	1.12	2.24	0	3.96	5.00
03/11/24	20	0.59	0	1.12	2.24	4.49	8.44	13.44
04/11/24	8.49	0.59	0	0.7678	0	0	1.3578	14.80

*Challenges in this situation are estimating variable standing charge, future energy prices, usage, to forecast revenue and impact on EBIT.*

*EBIT = Total monthly revenue – Operating Costs*

Back Up Notes:

**Table is per client**

Daily Standing Charge: This is a fixed cost of £0.59 per day.  
Cost for First 5 kWh: This is £0.00 as the first 5 kWh are free.

Cost for Second 5 kWh: If the daily usage is more than 5 kWh but less than or equal to 10 kWh, this is calculated as (daily kWh - 5) \* £0.22.

Cost for Third 5 kWh: If the daily usage is more than 10 kWh but less than or equal to 15 kWh, this is calculated as (daily kWh - 10) \* £0.45.

Cost for Extra kWh: If the daily usage exceeds 15 kWh, this is calculated as (daily kWh - 15) \* £0.90.

Total Daily Cost: Sum of all the costs.

Running Total for the Month: This is the cumulative balance to aggregate the income

**In excel the formula would be an if statement:**

If daily usage ( $U \leq 5$  kWh, Cost = £0.59 (Standing Charge)  
If  $5 < U \leq 10$  kWh, Cost = £0.59 + ( $U - 5$ ) \* £0.2244  
If  $10 < U \leq 15$  kWh, Cost = £0.59 + (5 \* £0.22) + ( $U - 10$ ) \* £0.4488

If  $U > 15$  kWh, Cost = £0.59 + (5 \* £0.2244) + (5 \* £0.4488) + ( $U - 15$ ) \* £0.8976

## Findings: Annual Electricity Revenue Ofgem Comparison For Client x (Typical Annual Usage 3.1 MWh)

	OFGEM	XYZ
Standing Charge (SC)	£0.6099	£0.59
Annual (SC) * 365	£222.61	£215.37
kWh Cost	£0.245	£0.22-£0.90 (Tiered)
Average Usage kWh	3,100	3,100
kWh Revenue	£759.50	£282.90
Total Comparative Revenue	£982.11	£498.27

ABC offers significant savings compared to Ofgem and XYZ.

Comparing ABC revenue against Ofgems standard rate

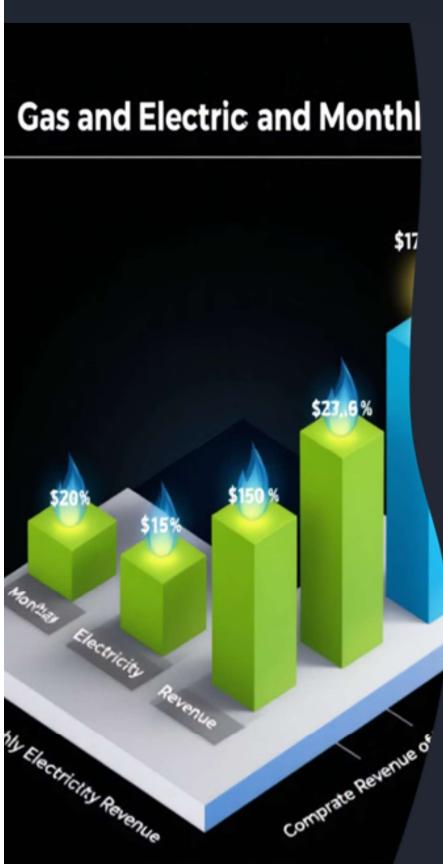
You have 1,825kwh unpaid  
this makes a considerable difference of £483.84 shortfall to the expected benchmark.

In loss revenue to XYZ at the tiered rate  
this equates to £402 per year per client or £4.02b lost per 10m customers

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Back Up Notes:

*The Electricity omits the first 5 free kwh from the formula = How much is being lost:  
rate 0.2244 @ daily £11.22m monthly £337m yearly £4096m*

The first two tiers are the main price points.  
 $8.523 - 5 \text{ free kwh} = 3.523039701 * 365 = 1,285 \text{kwh}$   
chargeable hours not paid for.



### 3. Projected Monthly Revenue

#### Individual Revenue G&E

Daily: G £2.37 + E £1.37 = £3.74

Monthly: G £72.03 + E £41.77 = £113.80

Annually: G £864.36 + E £501.2 = £1,365.56

#### Gas Revenue (10m customers)

Daily: £37.41m

Monthly: £1,137.97m

Annually: £13,655.61m

#### Electricity Revenue (10m customers)

Daily: £13.73m

Monthly: £417.67m

Annually: £5,012.02m

#### Total Combined Revenue (10m)

Daily: £51.14m

Monthly: £1,555.64m

Annually: £18,667.63m

The projected monthly revenue is shown for the individual, gas, electricity, and the total combined.

The Difference shows: that gas makes £8 billion more annually than electricity.

This places a high dependency on gas revenue

A review should look at the viability of targeting businesses who may have higher usage. or customer that sit in tier 3 and 4 rates to see if revenue can be increased

According to Ofgem typical usage of household with 4 to 5 people only use 4.1MWh per year which is 11.23Kwh per day.

This would increase revenue by @ £3b to £8.2b from £5b

The next steps will delve into what data is needed to help decision making.

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Back Up Notes:

Ofgem typical usage kwh  
 Low # people 1-2 Gas = 7,500 Elec 1,800  
 Medium # people 2-3 Gas = 11,500 Elec 2,700 looks like this group is targeted average daily use = 11.23kwh – would drastically increase the monthly revenue to 2067.27  
 High # people 4- 5 Gas 17,000 Elec 4,100 daily use = 11.23kwh – would only increase the monthly revenue to £689m and annual revenue of £8264m

This slide focuses on actionable next steps and recommendations



## 4. Next Steps and Recommendations

### 1. Model Refinement

Incorporate seasonal variations and regional differences in energy consumption patterns.

### 2. Customer Segmentation

Review historical data to identify potential for tier 3 & 4 usage based on different customer profiles.

### 3. Regulatory Compliance

Ensure ongoing alignment with Ofgem regulations and industry standards & competition law

### 4. Performance Monitoring

Implement robust tracking systems to compare actual revenue against projections.

### 1. Model Refinement

Seasonal Variations and Regional Differences:

- Incorporate adjustments for seasonal variations in energy consumption.
- Account for regional differences to enhance accuracy in projections.

### 2. Customer Segmentation & Usage Patterns:

- Review historical data to identify customer segments.
- Focus on identifying potential tier 3 and tier 4 electricity user profiles

### 3. Regulatory Compliance

Alignment with Regulations:

- Ensure ongoing compliance with Ofgem regulations.
- Align with industry standards and competition law to avoid any legal issues.

### 4. Performance Monitoring

Tracking Systems:

- Implement robust tracking systems to compare actual revenue against projections.
- Continuously monitor performance to make data-driven adjustments.

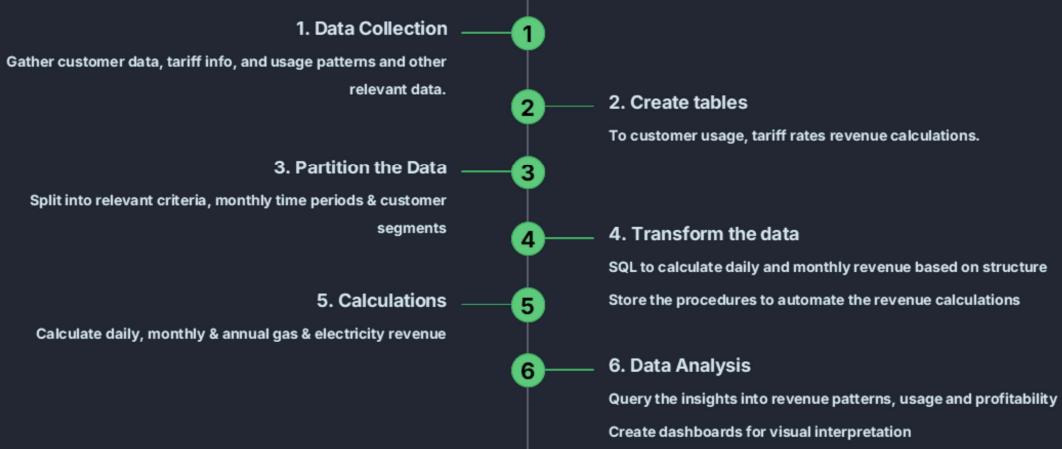
The next two slides will focus on the model refinement stage.

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Back Up Notes:

## 4. Next Steps: Model Using SnowFlake

### (Data Storage, processing & analytics)



#### Under Snowflake

##### 1. Data Ingestion Collect Data:

- It is important to avoid rubbish in and rubbish out and have accurate data
- Gather data on customer usage patterns, tariff rates, and other relevant information.
- Load Data into Snowflake: Use Snowflake's data loading capabilities to ingest data from various sources, such as CSV files, databases, and cloud storage.*

##### 2. Data Storage Create Tables:

- Structure the data for efficient processing and analysis
- By defining the tables in Snowflake to store and ingest the data.
- For example, you can create tables for customer usage, tariff rates, and revenue calculations.

##### 3. Partition Data:

- to manage large data sets
- on relevant criteria, such as time periods or customer segments, to optimize query performance.

##### 4. Data Transformation via SQL Queries:

- The queries can be reused to speed up processes
- Use Snowflake's SQL capabilities to transform the data.
- Write SQL queries to calculate daily and monthly revenue based on the ABC tariff structure.
- Stored Procedures: Create stored procedures to automate the revenue calculation process. This ensures consistency and reduces manual effort.

##### 5. Revenue Calculation

- This will enable revenue projections
- With Electricity & Gas Revenue calculated separately
- By daily usage breakdown: Calculating the daily cost based on the tiered pricing structure or flat rate used.
- Which should flow into Monthly Revenue: which is an aggregate of the daily costs to calculate the monthly revenue.
- Annual Usage: Use the typical annual usage to estimate monthly usage and revenue.

##### 6. Data Analysis Analytical Queries:

- Run analytical queries to gain insights into revenue patterns, customer usage, and profitability.

##### 7. Data Visualization:

- Generate reports
- Integrate Snowflake with BI tools like Tableau or Power BI to create interactive dashboards and visualizations.
- Use Snowflake's reporting capabilities to generate detailed reports on revenue calculations, usage patterns, and customer segments.
- Automate Reports: Schedule automated reports to provide regular updates to stakeholders.

We then move into GMAP

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#### Notes:

**Snowflake Data lake** - is a versatile data warehousing platform suitable for organizations needing scalable data storage, processing, and analytics capabilities, with support for various data types and robust security features. Can do regression analysis, clustering and predictive modelling & machine learning – real time

## 4. Next Steps: Model Using GMAP

### (Sales, Customer & Performance)



Once the data has been collected into snowflake then GMAP can structure the data to analyse by location and adapt to a changing market After which we can use Alteryx to create reports and a dashboard

I would expect to complete the following steps:

#### 1. Data Collection

-**Gather Customer Data:** on usage patterns, including daily and monthly electricity and gas consumption.

-**Tariff Data:** Input the ABC tariff structure into GMAP, including the daily standing charges and tiered pricing for electricity.

-**Market Data:** Collect data on market conditions, competitor pricing, and customer demographics.

#### 2. Data Analysis

-**Analyse Usage Patterns:** to identify trends and segments. Use GMAP to visualize how different customer segments use electricity and gas.

-**Revenue Projections:** Use GMAP to model revenue projections based on different usage scenarios. This includes calculating the revenue for typical, high, and low usage customers.

-**Margin Analysis:** Perform a gross margin analysis to understand the profitability of the ABC product. Use GMAP to help identify the most profitable customer segments and usage patterns.

#### 3. Scenario Modelling

-**What-If Scenarios:** This is to test different pricing strategies and their impact on revenue. For example, you can model the impact of changing the tiered pricing structure or adjusting the daily standing charges.

-**Sensitivity Analysis:** Conduct sensitivity analysis to understand how changes in customer usage or market conditions affect revenue. GMAP can help identify the key drivers of revenue and profitability.

#### 4. Reporting and Visualization

-**Interactive Dashboards:** Create reports to visualize the revenue projections, usage patterns, and margin analysis. This helps in presenting the data to stakeholders in a clear and concise manner.

-**Custom Reports:** Generate custom reports that summarize the key findings and recommendations.

#### 5. Decision Support

-**Data-Driven Decisions:** Generate insights from GMAP to make data-driven decisions about the pricing strategy for ABC. From setting the optimal prices, identifying target customer segments, and optimizing the marketing strategy.

#### 6. Continuous Monitoring

-Monitor the performance of the ABC product using GMAP. This helps in making timely adjustments to the pricing strategy based on real-time data and market conditions. So this brings us to the last slide

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Notes:

*GMAP is ideal for businesses looking to optimize their retail networks, analyse sales performance, and gain insights into customer data through location intelligence and business intelligence tools.*

Thank you for your attention, I am happy to answer any questions that you may have.

## 5. Q&A

