

Enhanced Time of Use (ETOU) Tariff Scheme

Briefing Session with Key Stakeholders

4th November 2015

Suruhanjaya Tenaga, Putrajaya

A Introduction to ETOU Scheme and Rates

B Analysis on Customer Bill

Time of Use (TOU) Tariff aims to encourage efficient energy usage as well as mitigate against increasing electricity bills to customers

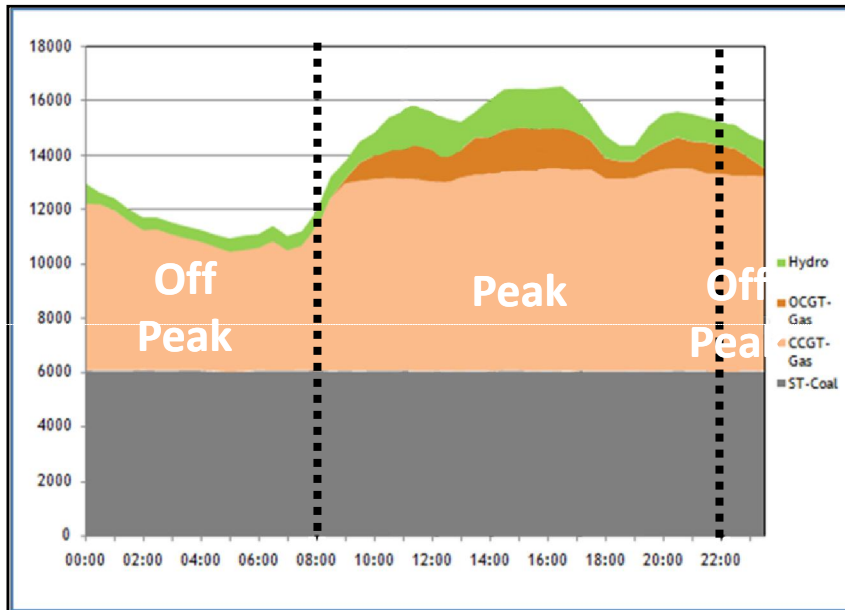
TOU in a nutshell

- TOU established primarily for demand side management
 - Encourage Mid Peak and Off Peak consumption
 - Discourage Peak consumption
- TOU encourages customers to use energy in an efficient manner by
 - using less energy during Peak hours or
 - Shift the activity out of the Peak hours

Benefits

- CUSTOMERS are able to control their bills through own consumption, by shifting usage of electricity to time of the day when rates are cheaper hence reducing monthly bills
- Encourages and inculcates demand side management and energy efficiency practice among customers

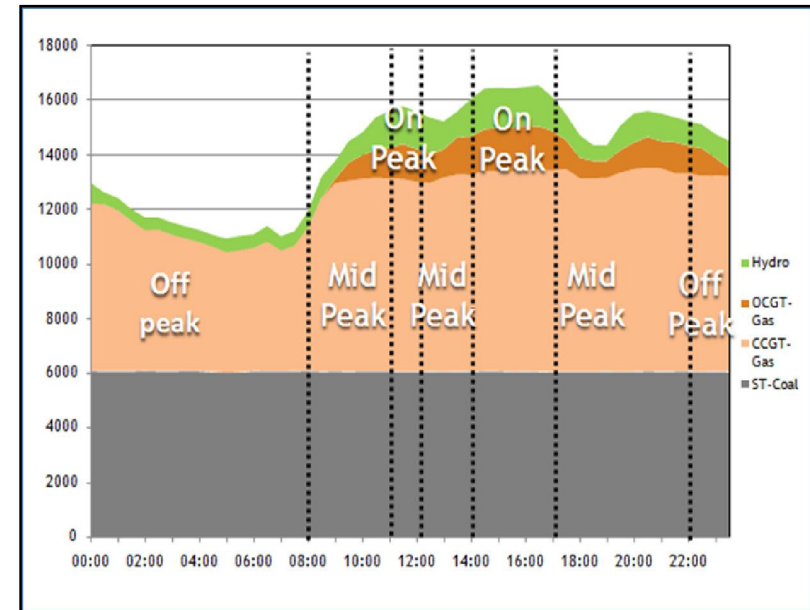
Existing TOU Tariff (C2, E2, E3, F2, and H2)



- 2 Time zones: Peak and Off-Peak Energy Rates
- Demand charges during Peak hours
- Offered to MV and HV customers



ETOU Scheme for Commercial (MV) and Industrial on LV, MV & HV

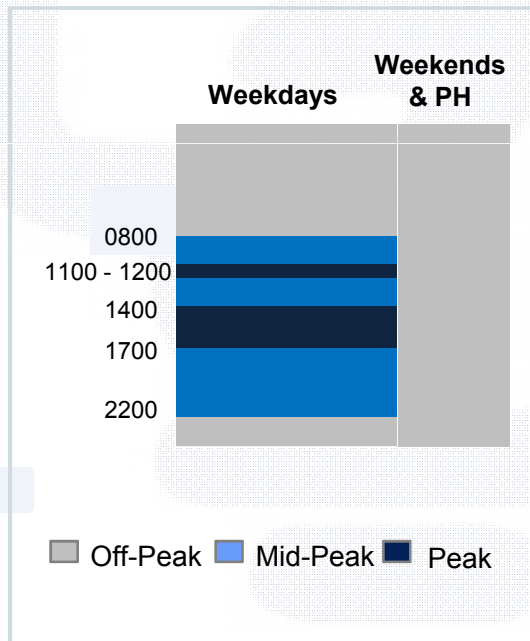


- 3 Time zones: Peak, Mid-Peak and Off-Peak Energy Rates
- Peak and Mid-Peak Demand Charges
- ETOU to be offered to;
 - Commercial MV
 - Industrial LV, MV and HV

ETOU offers Off-Peak rates throughout weekends and Public Holidays

Salient Features

- **Peak** time zone now reduced to **4 hours** (from the existing 14 hours)
- **Mid-Peak** zone of **10 hours** is introduced for Energy and Demand Charges at **rates lower** than the current peak rates
- Off-peak zone maintained for **10 hours**



Weekdays

- 3 different Energy Rates: Peak, Mid-Peak and Off-Peak rates
- 2 different Demand Charges: Peak and Mid-Peak charges

Weekends and Public Holidays¹

- Only Off-Peak energy rates
- Demand Charge is waived during weekend and Public Holidays

Notes:

1. ETOU will only include the fixed Public Holidays: New Year (1 Jan) , Labour Day (1 May) , Merdeka Day (31 Aug), Malaysia Day (16 Sept) & Christmas (25 Dec)

The ETOU tariff will be offered to customers under the following categories

Categories	Existing tariffs	Proposed ETOU tariffs
Commercial MV	C1	Commercial C1 MV ETOU
Commercial MV	C2	Commercial C2 MV ETOU
Industrial LV and Industrial LV (SIT)	D and Ds	Industrial D LV ETOU
Industrial MV and Industrial MV (SIT)	E1 and E1s	Industrial E1 MV ETOU
Industrial MV and Industrial MV (SIT)	E2 and E2s	Industrial E2 MV ETOU
Industrial HV and Industrial HV (SIT)	E3 and E3s	Industrial E3 HV ETOU

- ETOU will be offered on an **OPTIONAL** basis to Commercial and Industrial customers connected at LV, MV and HV.
- Effective **1 January 2016**;
 - a) ETOU for MV Commercial customers (Tariff C1 and C2)
 - b) ETOU for MV and HV Industrial customers (Tariff E1, E1s, E2, E2s, E3, and E3s)
- Effective **1 January 2017**;
 - a) ETOU for LV Industrial customers (Tariff D and Ds)
- ETOU implementation will be **in tandem with gradual removal of SIT discounts at 2% reduction on a yearly basis**

General Terms and Conditions

- All customers who wish to enroll for ETOU scheme must enter into an agreement.
- All interested customers must sign up for E-mail billing.
- The customers shall be under ETOU scheme for a minimum period of 6 months.
- There is no cost imposed for installation/reprogramming of meter for first time enrollment to this scheme.
- Customer to bear all costs associated to reverting to normal gazetted tariff including meter reprogramming and/or meter change and vice versa.
- ETOU customers will be subjected to Connected Load Charge (CLC) as per current policy.
- Existing customers under customized agreement may also apply for ETOU on a case by case basis and may be subjected to additional commercial terms and conditions.
- Not applicable for landlord tenant supply scheme

ETOU Scheme – Rates for Demand and Energy Charges

Tariff Category	Demand Charge (RM/kW/Month)		Energy Charge (sen/kWh)		
	Peak	Mid-Peak	Peak	Mid-Peak	Off Peak
Commercial C1 MV ETOU	34.00	28.80	58.40	35.70	28.10
Commercial C2 MV ETOU	48.40	42.60	63.60	33.90	22.40
Industrial D LV ETOU	42.10	37.20	48.40	32.70	24.90
Industrial E1 MV ETOU	35.50	29.60	56.60	33.30	22.50
Industrial E2 MV ETOU	40.00	36.00	59.20	33.20	21.90
Industrial E3 HV ETOU	38.30	35.00	57.60	32.70	20.20

Notes:

1. Weekend and Public holidays apply only Off-Peak energy rates and Demand Charge will be waived during weekend and Public Holidays.

A Introduction to ETOU Scheme and Rates

B Analysis on Customer Bill

C1 customer with an average monthly consumption of 352,785 kWh

1 Customer's Bill on Existing Tariff (C1)

Base Line	Average Monthly Consumption	Existing Rates	Average Monthly Bill
<u>Demand (kW)</u>		(RM/kW)	
0800 to 2200	572	30.3	17,332
<u>Energy (kWh)</u>		(sen/kWh)	
Peak (kWh)	62,135	36.5	22,679
Mid-Peak (kWh)	149,054	36.5	54,405
Off-Peak (kWh)	141,596	36.5	51,683
Total	352,785		146,098

Electricity bill of RM 146,098 based on existing tariff rates of C1

Monthly bill reduction of RM 7,641 (5.2%)

2 Customer's Bill on ETOU Rates

	Average Monthly Consumption	ETOU Rates	Average Monthly Bill
<u>Demand (kW)</u>	Average Monthly Demand Charge in a year	(RM/kW)	
Peak (kW)		34.0	
Mid-Peak (kW)		28.8	18,675 ¹
<u>Energy Charge (kWh)</u>		(sen/kWh)	
Peak (kWh)	42,004	58.4	24,530
Mid-Peak (kWh)	104,232	35.7	37,211
Off-Peak (kWh)	206,549	28.1	58,040
Total	352,785		138,457

Bill reduced to RM 138,457 due to:

- Off-Peak rates only, for weekends and Public Holidays
- Cheaper Demand and Energy rates during Mid Peak hours
- Assume 2.5% energy consumption shifts from Peak to Mid-Peak hours

Notes

1. Average monthly demand charge (Total Demand Charge over a year (RM) / 12 months)

1 Customer's Bill on Existing Tariff (C2)

Base Line	Average Monthly Consumption	Existing Rates	Average Monthly Bill
<u>Demand (kW)</u>		(RM/kW)	
0800 to 2200	290	45.1	13,079
<u>Energy (kWh)</u>		(sen/kWh)	
Peak (kWh)	1,690	36.5	617
Mid-Peak (kWh)	27,672	36.5	10,100
Off-Peak (kWh)	77,182	22.4	17,289
Total	106,544		41,085

Electricity bill of RM 41,085 based on existing tariff rates of C2

Monthly bill reduction of RM 2,266 (5.5%)

2 Customer's Bill on ETOU Rates

	Average Monthly Consumption	ETOU Rates	Average Monthly Bill
<u>Demand Charge (kW)</u>	Average Monthly Demand Charge in a year	(RM/kW)	
Peak (kW)		48.4	
Mid-Peak (kW)		42.6	12,333 ¹
<u>Energy Charge (kWh)</u>		(sen/kWh)	
Peak (kWh)	1,115	63.6	709
Mid-Peak (kWh)	18,787	33.9	6,369
Off-Peak (kWh)	86,642	22.4	19,408
Total	106,544		38,819

Bill reduced to RM 38,819 due to:

- Off-Peak rates only, for weekends and Public Holidays
- Cheaper Demand and Energy rates during Mid Peak hours
- Assume 2.5% energy consumption shifts from Peak to Mid-Peak hours

Notes

1. Average monthly demand charge (Total Demand Charge over a year (RM) / 12 months)

1 Customer's Bill on Existing Tariff (D)

Base Line	Average Monthly Consumption	Existing Rates	Average Monthly Bill
<u>Demand (kW)</u>		(RM/kW)	
0800 to 2200	NA	NA	NA
<u>Energy (kWh)</u>		(sen/kWh)	
First 200 (kWh)	200	38.0	76
201 kWh onwards	290,401	44.1	128,067
Total	290,601		128,143

Electricity bill of RM 128,143 based on existing tariff rates of D

Monthly bill reduction of RM 20,305 (15.8%)

2 Customer's Bill on ETOU Rates

	Average Monthly Consumption	ETOU Rates	Average Monthly Bill
<u>Demand Charge (kW)</u>	Average Monthly Demand Charge in a year	(RM/kW)	
Peak (kW)		42.1	
Mid-Peak (kW)		37.2	20,951 ¹
<u>Energy Charge (kWh)</u>		(sen/kWh)	
Peak (kWh)	33,326	48.4	16,130
Mid-Peak (kWh)	85,840	32.7	28,070
Off-Peak (kWh)	171,435	24.9	42,687
Total	290,601		107,838

Bill reduced to RM 107,838 due to:

- Off-Peak rates only, for weekends and Public Holidays
- Cheaper Demand and Energy rates during Mid Peak hours
- Assume 2.5% energy consumption shifts from Peak to Mid-Peak hours

Notes

1. Average monthly demand charge (Total Demand Charge over a year (RM) / 12 months)

1 Customer's Bill on Existing Tariff (E1)

Base Line	Average Monthly Consumption	Existing Rates	Average Monthly Bill
<u>Demand (kW)</u>		(RM/kW)	
0800 to 2200	1,844	29.6	54,582
<u>Energy (kWh)</u>		(sen/kWh)	
Peak (kWh)	124,500	33.7	41,957
Mid-Peak (kWh)	295,723	33.7	99,659
Off-Peak (kWh)	271,782	33.7	91,591
Total	692,005		287,788

Electricity bill of RM 287,788 based on existing tariff rates of E1

Monthly bill reduction of RM 18,971 (6.6%)

2 Customer's Bill on ETOU Rates

	Average Monthly Consumption	ETOU Rates	Average Monthly Bill
<u>Demand Charge (kW)</u>	Average Monthly Demand Charge in a year	(RM/kW)	
Peak (kW)		35.5	
Mid-Peak (kW)		29.6	56,370 ¹
<u>Energy Charge (kWh)</u>		(sen/kWh)	
Peak (kWh)	93,928	56.6	53,163
Mid-Peak (kWh)	228,858	33.3	76,210
Off-Peak (kWh)	369,219	22.5	83,074
Total	692,005		268,817

Bill reduced to RM 268,817 due to:

- Off-Peak rates only, for weekends and Public Holidays
- Cheaper Demand and Energy rates during Mid Peak hours
- Assume 2.5% energy consumption shifts from Peak to Mid-Peak hours

Notes

1. Average monthly demand charge (Total Demand Charge over a year (RM) / 12 months)

1 Customer's Bill on Existing Tariff (E2)

Base Line	Average Monthly Consumption	Existing Rates	Average Monthly Bill
<u>Demand (kW)</u>		(RM/kW)	
0800 to 2200	951	37.0	35,187
<u>Energy (kWh)</u>		(sen/kWh)	
Peak (kWh)	14,721	35.5	5,226
Mid-Peak (kWh)	37,994	35.5	13,488
Off-Peak (kWh)	42,044	21.9	9,208
Total	94,759		63,108

Electricity bill of RM 63,108 based on existing tariff rates of E2

Monthly bill reduction of RM 5,528 (8.8%)

2 Customer's Bill on ETOU Rates

	Average Monthly Consumption	ETOU Rates	Average Monthly Bill
<u>Demand Charge (kW)</u>	Average Monthly Demand Charge in a year	(RM/kW)	
Peak (kW)		40.0	
Mid-Peak (kW)		36.0	31,609 ¹
<u>Energy Charge (kWh)</u>		(sen/kWh)	
Peak (kWh)	7,621	59.2	4,512
Mid-Peak (kWh)	21,021	33.2	6,979
Off-Peak (kWh)	66,117	21.9	14,480
Total	94,759		57,580

Bill reduced to RM 57,580 due to:

- Off-Peak rates only, for weekends and Public Holidays
- Cheaper Demand and Energy rates during Mid Peak hours
- Assume 2.5% energy consumption shifts from Peak to Mid-Peak hours

Notes

1. Average monthly demand charge (Total Demand Charge over a year (RM) / 12 months)

1 Customer's Bill on Existing Tariff (E3)

Base Line	Average Monthly Consumption	Existing Rates	Average Monthly Bill
<u>Demand (kW)</u>		(RM/kW)	
0800 to 2200	8,905	35.5	316,128
<u>Energy (kWh)</u>		(sen/kWh)	
Peak (kWh)	159,254	33.7	53,669
Mid-Peak (kWh)	414,610	33.7	139,724
Off-Peak (kWh)	468,408	20.2	94,618
Total	1,042,272		604,138

Electricity bill of RM 604,138 based on existing tariff rates of E3

Monthly bill reduction of RM 25,558 (4.2%)

2 Customer's Bill on ETOU Rates

	Average Monthly Consumption	ETOU Rates	Average Monthly Bill
<u>Demand Charge (kW)</u>	Average Monthly Demand Charge in a year	(RM/kW)	
Peak (kW)		38.3	
Mid-Peak (kW)		35.0	286,588 ¹
<u>Energy Charge (kWh)</u>		(sen/kWh)	
Peak (kWh)	114,057	57.6	65,697
Mid-Peak (kWh)	310,370	32.7	101,491
Off-Peak (kWh)	617,845	20.2	124,805
Total	1,042,272		578,580

Bill reduced to RM 578,580 due to:

- Off-Peak rates only, for weekends and Public Holidays
- Cheaper Demand and Energy rates during Mid Peak hours
- Assume 2.5% energy consumption shifts from Peak to Mid-Peak hours

Notes

1. Average monthly demand charge (Total Demand Charge over a year (RM) / 12 months)

Thank you