



# **ENERGY RESEARCH AND TESTING LABORATORY SERVICES (ERTLS)**



# SUMMARY

## Energy Research and Testing Laboratory Services (ERTLS) External Services

PROCESS	DURATION	CLASSIFICATION
<b>ERTLS - Geoscientific Research and Fuel Testing Laboratory Division</b>		
1. Issuance of Chemical / Geological Laboratory Test Report	10 working days	Highly Technical
<b>ERTLS - Lighting and Appliance Testing Laboratory</b>		
2. Issuance of Inspection Report for Generic Models / Exempted Appliances	5 working days	Highly Technical
3. Issuance of Calibration Certificate for Electrical, Temperature and Energy-Monitoring Instruments for External Customers	Electrical Instruments - 6.5 working days  Temperature Instruments - 7 working days	Highly Technical
4. Issuance of Energy Performance Test Report for Lighting Products and Other Devices	see Reference B	Highly Technical
5. Issuance of Energy Performance Test Report for Appliance and Equipment	see Reference B	Highly Technical



## Energy Research and Testing Laboratory Services (ERTLS) Internal Services

PROCESS	DURATION	CLASSIFICATION
<b>ERTLS - Lighting and Appliance Testing Laboratory</b>		
1. Issuance of Calibration Certificate for Electrical, Temperature and Energy-Monitoring Instruments for Internal Customers	Electrical Instruments - 6 working days  Temperature Instruments - 6.5 working days	Highly Technical
<b>ERTLS - Geoscientific Research and Fuel Testing Laboratory Division</b>		
2. Issuance of Chemical / Geological Laboratory Test Report	10 working days	Highly Technical



## **EXTERNAL SERVICES**

# **GEOSCIENTIFIC RESEARCH AND FUEL TESTING LABORATORY DIVISION**



## \*Issuance of Chemical/Geological Laboratory Test Report

Testing of upstream and downstream petroleum as well as coal and renewable energy resources to determine compliance to the Philippine National Standard (PNS).

<b>Office or Division:</b>	Geoscientific Research and Fuel Testing Laboratory Division (GRFTLD)			
<b>Classification:</b>	Highly Technical Transaction			
<b>Type of Transaction:</b>	Government-2-Citizen			
<b>Who May Avail:</b>	Academe, Researchers, Importers, Manufacturers, Private Laboratories, Public			
<b>CHECKLIST OF REQUIREMENTS</b>		<b>WHERE TO SECURE</b>		
1. Sample for Analysis		Office of the ERTLS Director		
2. Original (1) copy of Request for Laboratory Services 1 – External Form (GRFTL-SF-1)				
3. Photocopy (1) of Official Receipt of Payment – Laboratory Services Fee				
4. For students, (1) copy of endorsement letter from School Head to Avail Student Discount				
<b>CLIENT STEPS</b>	<b>AGENCY ACTIONS</b>	<b>FEES TO BE PAID</b>	<b>PROCESSING TIME</b>	<b>PERSON RESPONSIBLE</b>
1. Submission of samples and Request for Laboratory Services form (GRFTL-SF-1)	1.1 Reviews / checks the correctness of the filled-out request form	None	4 Hours	<i>ERTLS OD Staff / Technical Staff of the concerned Section of GRFTLD</i>  <i>Note:</i> ➤ <i>Geothermal Coal Section - coal and geothermal water samples</i> ➤ <i>Processed Fuels Section - petroleum and biofuel samples</i> ➤ <i>Geology Section- rock samples</i>
	1.2 Examines the nature/ size/ weight/ volume of sample if acceptable for the required analysis.			
	1.3 Issues Request for Laboratory Services Billing			

				➤ <i>Oil and Gas Section - geothermal gas, biogas or synthesis gas</i>
2. Payment of Laboratory Services Fee	2.1 Issues the Official Receipt for testing fee	Please see attached DOE Schedule of Fees and Charges CY 2023	4 Hours	<i>Cashier, Treasury Division</i>
3. Submission of filled-out Customer Rating – Submission of Sample Form (GRFTL-SF-5a) and photocopy of the Official Receipt	3.1 Consolidates filled-out forms and photocopy of the Official Receipt	None		<i>ERTLS OD Staff</i>
	3.2 Transmits GRFTL-SF-1 to the Office of the GRFTLD Chief SRS			<i>ERTLS OD Staff, GRFTLD Chief SRS Staff &amp; GRFTLD Chief SRS</i>
	3.3 Issues Work Order (GRFTL-SF-3)  a. Dispatches GRFTL-SF-3 to the assigned GRFTLD Section			<i>GRFTLD Chief SRS Staff &amp; GRFTLD Chief SRS</i>
	3.4 Analysis of Sample  a. Conducts Sample Preparation / Testing / Analysis ( <i>Refer to page 4 – Conduct of Sample Preparation/ Testing/ Analysis</i> ) b. Prepares Results of Analysis c. Reviews and Endorses Transmittal Letter		8 Working Days	<i>GRFTLD Staff (Spvg. SRS, Sr. SRS, SRS II, SRS I, SRA, LT) and GRFTLD Chief SRS</i>

	and Test Report to GRFTLD Chief SRS			
	<p>3.5 Endorses Transmittal Letter and Test Report to ERTLS Director</p> <p>a. Affixes initial of supervisor of the concerned section and GRFTLD Chief SRS and signature of the ERTLS Director to the Transmittal Letter</p>		1 Working Day	<p><i>Spvg. SRS, GRFTLD Chief SRS and ERTLS Director</i></p>
Pick up of Test Report and submission of ERTLS – GRFTLD Customer Satisfaction Measurement Form [Customer Rating – Release of Test Report (GRFTL-SF-5b)]	<p>3.6 Releases Test Report</p> <p>a. Receives copy of Test Report acknowledged by the customer</p> <p>b. Consolidates filled-out forms</p>			<p><i>ERTLS OD Staff</i></p>
<b>Total Number of Days</b>		<b>10 Working Days</b>		

## CONDUCT OF SAMPLE PREPARATION / TESTING / ANALYSIS<sup>a</sup>

<b>Processed Fuels Section</b>	
<b>PNS Test for Automotive Diesel Oil</b> (9 samples) <sup>b</sup>	additional 3 days for every 1 - 3 sample/s in excess of 9 samples
<b>PNS Test for B100</b> (6 samples) <sup>b</sup>	additional 3 days for every 1 - 2 sample/s in excess of 6 samples
<b>PNS Test for E100</b> (15 samples) <sup>b</sup>	additional 3 days for every 1 - 5 sample/s in excess of 15 samples
<b>PNS Test for Fuel Oil (Industrial)</b> (6 samples) <sup>b</sup>	additional 3 days for every 1 - 2 sample/s in excess of 6 samples
<b>PNS Test for Gasoline</b> (6 samples) <sup>b</sup>	additional 3 days for every 1 - 2 sample/s in excess of 6 samples
PNS Test for Kerosene (15 samples)	additional 3 days for every 1 - 5 sample/s in excess of 15 samples
<b>Non-PNS Test for Diesel</b> (20 samples) <sup>b</sup>	additional 4 days for every 1 - 4 sample/s in excess of 20 samples
<b>Non-PNS Test for Gasoline</b> (20 samples) <sup>b</sup>	additional 4 days for every 1 - 4 sample/s in excess of 20 samples
Other Samples e.g. Pyrolysis Oil and Biofuel from other feedstocks (8 samples)	
<b>Geothermal-Coal Section</b>	
Heating Value and Sulfur Analysis with Sample Preparation (8 samples per batch)	additional 2 days for every 1 - 3 sample/s in excess of 8 samples
Proximate Analysis, Ultimate Analysis and Heating Value Determination with Sample Preparation (3 samples per batch)	additional 2 days for every 1 - 2 sample/s in excess of 3 samples
Proximate Analysis with Sample Preparation (3 samples per batch)	additional 2 days for every 1 - 2 sample/s in excess of 3 samples
Ultimate Analysis (CHNAS) with Sample Preparation (4 samples per batch)	additional 2 days for every 1 - 2 sample/s in excess of 4 samples
<i>(For batch analyses without sample preparation, testing may be completed earlier than 10 working days)</i>	
Complete Ion Analysis (5 samples)	additional 5 days for every 1 - 5 sample/s in excess of 5 samples
<b>Oil and Gas Section</b>	
Analysis of Crude Oil (5 samples)	additional 2 days for every 1 sample in excess of 5 samples
Analysis of Natural Gas / Biogas (15 samples)	additional 2 days for every 1 - 4 sample/s in excess of 15 samples
Analysis of Source Rocks / Soil	*Minimum of 10 working days per every one (1) sample. Duration of analysis will depend on the condition of the samples received.
Analysis of Stable Isotope (5 samples)	additional 2 days for every 1 sample in excess of 5 samples
PNS Test for B100: GC Analysis (5 samples)	additional 2 days for every 1 sample in excess of 5 samples
PNS Test for E100: GC Analysis (10 samples)	additional 3 days for every 1 - 2 sample/s in excess of 10 samples
Analysis of Liquefied Petroleum Gas (5 samples)	additional 2 days for every 1 sample in excess of 5 samples
<b>Geology Section</b>	
Micropaleontological / Petrographic / XRD Analysis (3 samples)	additional 3 days for every 1 sample in excess of 3 samples

**Remarks:**

- a. Upon the occurrence of any force majeure event, laboratory shall promptly inform the customer specifying the cause of delay of analysis of samples in accordance with GRFTL Communication Plan.
- b. **ISO 9001:2015 certified processes**



**Department of Energy  
Energy Research and Testing Laboratory Services  
Geoscientific Research and Fuel Testing Laboratory Division  
Schedule of Fees and Charges CY 2023**

<b>Geothermal-Coal Section</b>		<b>Amount</b>	<b>Remarks</b>
<b>Laboratory Services</b>			
<b>1</b>	<b>Coal</b>		
	Calorific Value, CV (Coal)	1,500.00	
	Carbon, Hydrogen and Nitrogen, CHN (Coal)	3,650.00	
	Carbon, Hydrogen and Nitrogen, CHN (Oil)	4,950.00	
	Hardgrove Grindability Index, HGI	1,200.00	
	Proximate Analysis	2,000.00	
	Residual Moisture, RM	400.00	
	Ash, A	850.00	
	Volatile Combustible Matter, VCM	750.00	
	Sample Preparation	650.00	
	Sieve Analysis (per size)	200.00	
	Total Sulfur, S	1,250.00	
<b>2</b>	<b>Geothermal Water Analysis</b>		
	Alkalinity	500.00	
	Arsenic (As)	900.00	
	Boron (B)	600.00	
	Cadmium	400.00	
	Calcium (Ca)	400.00	
	Cesium (Cs)	400.00	
	Chloride (Cl)	550.00	
	Chromium (Hexavalent)	450.00	
	Copper (Cu)	400.00	
	Iodine (I)	1,700.00	
	Iron (Fe)	400.00	
	Lead (Pb)	400.00	
	Lithium (Li)	400.00	
	Magnesium (Mg)	400.00	
	Manganese (Mn)	400.00	
	Mercury (Hg)	1,500.00	
	Nickel (Ni)	400.00	
	pH	350.00	
	Potassium (K)	450.00	
	Rubidium (Rb)	400.00	
	Silica (SiO <sub>2</sub> )	700.00	
	Silver (Ag)	400.00	
	Sodium (Na)	400.00	
	Specific Conductivity	250.00	
	Sulfate (SO <sub>4</sub> )	700.00	
	Total Dissolved Solids	250.00	
	Total Suspended Solids	450.00	
	Zinc (Zn)	400.00	

Oil and Gas Section		Amount	Remarks	
Laboratory Services				
3	<b>Oil and Gas</b>			
	<b>Automotive LPG</b>			
	Copper Strip Corrosion	2,850.00	New	
	Density of LPG	2,250.00	New	
	Gauge Vapor Pressure of LPG	4,600.00	New	
	Hydrogen Sulfide in LPG	1,500.00	New	
	LP Gases and Propene Concentrates by GC	8,250.00	New	
	Residue and Volatility	2,000.00	New	
	Sulfur in LPG	3,850.00	New	
	<b>Biodiesel / CME</b>			
	Fatty Acid Methyl Esters (FAME) in Biodiesel	4,200.00		
	Succeeding Run	2,500.00		
	FAME and Methyl Laurate (C12) in Biodiesel	5,800.00		
	Succeeding Run	3,380.00		
	Free Glycerin in Biodiesel	1,250.00		
	Linolenic Acid in Biodiesel	4,320.00		
	Succeeding Run	2,100.00		
	Methanol in Biodiesel	3,350.00		
	Succeeding Run	2,150.00		
	Methyl Laurate in Biodiesel	3,750.00		
	Succeeding Run	1,950.00		
	Mono, Di, tri, FG and TG in Biodiesel	7,500.00		
	Succeeding Run	4,450.00		
	Total Acid Number in Biodiesel, Color Indicator	1,625.00		
	Total Acid Number in Biodiesel, Potentiometric	2,100.00		
	Total Glycerin in Biodiesel	2,750.00		
	<b>Bioethanol</b>			
	Ethanol and Methanol Purity in Denatured Fuel Ethanol	3,200.00		
	Succeeding Run	1,650.00		
	Total Acidity (as Acetic Acid) in Bioethanol	550.00		
	<b>Crude Oil</b>			
	C12 + Components of Whole Oil / Saturate Fraction	3,950.00		
	Degree API Gravity of Oil Containing Water and Sediments	590.00		
	Degree API Gravity of Oil Without Sample Preparation	450.00		
	Extractable Organic Matter (EOM)	5,220.00		
	Fractional Distillation of Crude Oil	1,880.00		
	Liquid Chromatographic Separation of EOM / Whole Oil into Saturates, Aromatics and NSO	4,050.00		
	Separation of Crude Oil / Petroleum from Water and Sediments	600.00		
	<b>Gas Condensate</b>			
	Carbon Dioxide (CO <sub>2</sub> ) in Gas Condensate	1,400.00		
	Hydrogen Sulfide (H <sub>2</sub> S) in Gas Condensate	1,560.00		
<b>Isotope Analysis</b>				
C13 Isotope in Gas Sample	9,950.00			
Succeeding Run	5,350.00			
N15 Isotope in Various Samples	13,700.00	New		
Succeeding Run	8,700.00	New		
O18 Isotope in Water Sample	10,100.00			
Succeeding Run	5,350.00			

<b>Oil and Gas Section</b>		<b>Amount</b>	<b>Remarks</b>
<b>Laboratory Services</b>			
	S34 Isotope in Various Samples	13,600.00	
	Succeeding Run	8,650.00	
<b>Natural Gas and Biogas</b>			
	CO <sub>2</sub> and H <sub>2</sub> S Gases	1,250.00	
	Hydrocarbon Gases (C1-C4)	3,500.00	
	Inorganic gases Plus Methane (N <sub>2</sub> , H <sub>2</sub> , Ar, O <sub>2</sub> , He, C1)	3,350.00	
<b>Source Rock and Cuttings</b>			
	Pyrolysis of Source Rock	2,700.00	
	Sample Preparation for Dry Cuttings	450.00	
	Sample preparation for wet Cuttings	540.00	
	Total organic / Inorganic Carbon	3,050.00	
<b>Tetrafluoroethane</b>			
	Tetrafluoroethane / R134a		
	With Standard	3,320.00	
	Without Standard	3,100.00	
<b>Processed Fuels Section</b>			
<b>Laboratory Services</b>			
<b>4</b>	<b>Processed Fuels</b>		
	API Gravity/Density/Specific Gravity (Hydrometer)	600.00	
	Acid/Base/Acetic/Iodine/Chloride/Saponification	2,700.00	New
	Acidity/Alkalinity, pHe	600.00	New
	Aromatics with Oxygenates, % Volume	6100.00	
	Aromatics, % Volume	4,600.00	
	Ash (Sulfated), % Mass	1,900.00	
	Ash, % Mass	1,900.00	
	Carbon Residue (Conradson), % Mass	1,100.00	
	Carbon Residue 10% Distillation Residue, % Mass	2,600.00	
	Carbon Residue (MCRT), % Mass	1,100.00	
	Carbon Residue 10% Distillation Residue, % Mass	2,600.00	
	Cetane Number	10,600.00	
	Cetane Number, Calculated	2,300.00	
	Cloud Point, °C	1,100.00	
	Color, ASTM (Automated)	950.00	New
	Color, ASTM (Manual)	600.00	
	Copper Corrosion Test	2,400.00	
	Density/Specific Gravity (Densitometer)	750.00	
	Diesel Analyzer - Density/FAME/Cetane Number	1,100.00	
	Distillation Characteristics, °C	1,900.00	
	Distillation Temperature (AET), °C	2,800.00	
	Electrical Conductivity, uS/m	650.00	New
	Existent Gum, mg/100mL	3,200.00	New
	FAME and Methyl Laurate, % Volume - GC	7,300.00	New
	Succeeding Run	4,600.00	New
	FAME (Fatty Acid Methyl Ester), vol % (FTIR)	1,400.00	
	Flash Point (COC), °C	1,400.00	
	Flash Point (PM), °C	1,000.00	
	Gasoline Analyzer	1,000.00	
	Group I & II Metals and Phosphorous, ppm	7,500.00	New
	Hydrocarbon (Benzene & Aromatics, % Vol)	6,900.00	New
	Succeeding Run	4,400.00	New

<b>Processed Fuels Section</b>		<b>Amount</b>	<b>Remarks</b>
<b>Laboratory Services</b>			
	Insolubles, % Mass		
	Pentane	1,700.00	
	Toluene	1,800.00	
	Kinematic Viscosity, mm <sup>2</sup> /s	1,100.00	
	Lead in Gasoline, g/L (XRF)	2,100.00	
	Lubricity, Micron	5,900.00	New
	Octane Number, RON (CFR)	10,400.00	
	Oxidation Stability, Hours	4,600.00	
	Oxygenates (Ethanol and Methanol), % vol - GC	6,900.00	New
	Succeeding Run	4,400.00	New
	Pour Point, °C	1,100.00	
	Sediment by Extraction, % Volume	2,200.00	
	Sulfur, % Mass (UVF)	2,300.00	
	Sulfur, % Mass (WD-XRF)	3,000.00	New
	Sulfur, % Mass (XRF)	2,100.00	
	Vapor Pressure, kPa	900.00	
	Viscosity Index	1,800.00	
	Water and Sediments, % Volume	1,100.00	
	Water by Distillation, % Volume	1,000.00	
	Water by Karl Fischer, % Volume - Volumetric	1,300.00	
	Water by Karl Fischer, % Volume - Coulometric	3,300.00	New
	Wear Metals/Trace Metals, % Volume (per Metal)	800.00	
<b>Geology Section</b>			
<b>Laboratory Services</b>			
<b>5</b>	<b>Processing/Sample Preparation</b>		
	Coal - Impregnated Polished Section (Briquette)	1,700.00	
	Coal - Polished Section (Whole Sample)	950.00	
	Drying of Ditch Cutting Samples (per Box)	600.00	
	Impregnated Polished Thin Section (Opaque Minerals)	1,700.00	
	Impregnated Polished Thin Section	1,500.00	
	Impregnated Polished Thin Section with Blue Dye	1,800.00	
	Normal Thin Section	1,200.00	
	Plain Slabbing/Plain Cutting	300.00	
	Polished Thin Section (for Opaque Minerals)	1,500.00	
	Polished Slab (Max Dimension 3x2x1 inches)	400.00	
	Smear Slide (Calcareous Nanno Fossils)	400.00	
	Staining using Alizarin Red (1-5 Sample/s)	100.00	
	Washed Residue (Foraminifera)	400.00	
	XRD-Extraction and Air Drying for Oriented Clay	500.00	New
	XRD-Glycol Treatment for Oriented Clay Sample	300.00	New
	XRD-Heat Treatment at 400°C for Oriented Clay	350.00	New
	XRD-Heat Treatment at 500°C for Oriented Clay	350.00	New
	XRD-Powdering for Random Sample	250.00	New
<b>6</b>	<b>Analysis</b>		
	Coal - Vitrinite Reflectance measurement	3,500.00	New
	Coal - Maceral Identification	4,000.00	New
	Megascopic/Hand Specimen Rock Identification	500.00	
	Micropaleontological Analysis of Rock Sample (Foraminifera)	1,900.00	
	Micropaleontological Analysis of Rock Sample (Nanno Fossil)	1,500.00	
	Petrographic Analysis of Rock Sample	1,500.00	
	X-ray Diffraction Analysis per Scan	2,000.00	New
	X-ray Diffraction, Interpretation	1,500.00	New

<b>Laboratory Services</b>		<b>Amount</b>	<b>Remarks</b>
<b>Other Services</b>			
	Biostratigraphic Report of Well		
	First 7,000 feet / 2,133 meters)	48,000.00	
	(excluding Sample Preparation and Analysis)		
	For Succeeding 1,000 ft or a fraction thereof; 10% of computed cost	4,800.00	
	Photomicrography of Fossils (1-5 Samples, final shot/s)	400.00	
	Photomicrography of Rocks (1-5 Samples, final shot/s)	500.00	



# **EXTERNAL SERVICES**

## **LIGHTING AND APPLIANCE TESTING LABORATORY**



## \*Issuance of Inspection Report for Generic Models/Exempted Appliances

Inspection of generic models / exempted products are services related to ES&L program rendered by LATL. This includes generic models / exempted products for air conditioners, refrigerators, clothes washers and televisions.

<b>Office or Division:</b>	Lighting and Appliance Testing Laboratory (LATL)			
<b>Classification:</b>	Highly Technical Transaction			
<b>Type of Transaction:</b>	Government-2-Citizen, Government-2-Government, Government-2-Business			
<b>Who May Avail:</b>	Private companies, industries, academe, government institutions			
<b>CHECKLIST OF REQUIREMENTS</b>		<b>WHERE TO SECURE</b>		
1. Approved registration to ERTLS-OSMS		Client to register to ERTLS-OSMS website ( <a href="https://ertls-osms.doe.gov.ph/">https://ertls-osms.doe.gov.ph/</a> )		
2. Filled out service request in ERTLS-OSMS website		Client to fill out service request in ERTLS-OSMS website		
3. One (1) uploaded/scanned copy of Approved Order of Payment		To be uploaded by DOE-LATL-AES to ERTLS-OSMS website once service request is reviewed		
4. Inspection Fee/s and one (1) uploaded/scanned copy of proof of payment		Client to upload proof of payment to ERTLS-OSMS website.		
5. Inspection Sample/s (Base and Generic models)		To be submitted/sent by the client to DOE-LATL-AES		
6. One (1) uploaded/scanned copy or personally conformed inspection form		To be signed and submitted by client personally to DOE-LATL-AES or through ERTLS-OSMS		
7. Filled out Customer Satisfaction in ERTLS-OSMS website		Client to fill out customer satisfaction in ERTLS-OSMS to download Calibration Certificate		
<b>CLIENT STEPS</b>	<b>AGENCY ACTIONS</b>	<b>FEES TO BE PAID</b>	<b>PROCESSING TIME</b>	<b>PERSON RESPONSIBLE</b>
1. Register to ERTLS-OSMS (Energy Research and Testing Laboratory Services – Online Service Management System).	1.1. Assist client in ERTLS-OSMS Registration.	N / A	N / A	Lab. Tech II / Science Research Specialist I / Science Research Specialist II / Senior Science Research Specialist,

<p><b>Note:</b></p> <p>a. Client registers to ERTLS-OSMS only once;</p> <p>b. If the client is already registered, skip this step, and proceed to client step no. 2;</p> <p>c. The registration of the client to ERTLS-OSMS is beyond LATL control and is not included in the normal processing time;</p> <p>d. Client may also bring the inspection sample for walk-in application but will also be instructed to register and request service through ERTLS-OSMS</p>	1.2. Review and approve customer registration			Lighting and Appliance Testing Laboratory
				Chief SRS, LATL
2. Request for inspection by filling-out service request form through ERTLS-OSMS.	2.1 Receive the request of client through ERTLS-OSMS.	N / A	4 Hours	Lab. Tech II / SRS I / SRS II / Sr. SRS, LATL
<p><b>Note:</b></p> <p>a. Client must upload photo/media of inspection sample/s.</p> <p>b. If ERTLS-OSMS is not working (i.e., system malfunction, server down, etc.), LATL</p>	2.2 Review the service request.			



will revert to manual receiving and processing of inspection request/s.					
3. Request for Order of Payment (OoP) through ERTLS-OSMS.	3.1 Receive the OoP from client through ERTLS-OSMS.	N / A		<i>Lab. Tech II / SRS I / SRS II / Sr. SRS, LATL</i>	
	3.2 Prepare OoP through Collection Monitoring System (COMS). Print out hard copy of the OoP.				
	3.3 Approve the OoP.				<i>Sr. SRS / Supv. SRS / Chief SRS, LATL</i>
	3.4 Upload the approved OoP to ERTLS-OSMS.				<i>Sr. SRS / Supv. SRS, LATL</i>
4. Pay inspection fee/s to DOE Treasury through ERTLS-OSMS.	4.1 Verify client's payment through ERTLS-OSMS.	Php 600.00 per model	4 Hours	<i>Collection Officer, Treasury Division</i>	
	4.2 Approve the service request				<i>Chief SRS, LATL</i>
5. Bring/send the inspection sample/s to DOE-LATL-AES.  <b>Note:</b> a. During the schedule of inspection, client may be physically available to sign and conform the inspection form/s. or if the client is not	5.1 Wait for the inspection sample/s to be delivered in DOE-LATL-AES.	Client is responsible for logistic arrangements and fees	Depends on client	<i>Lab. Tech II / SRS I / SRS II / Sr. SRS, LATL</i>	

<p>physically available, he may receive and sign the inspection form/s through ERTLS-OSMS</p> <p>b. If client opts to conduct inspection outside DOE, the client will bear all travel expenses.</p>				
<p>6. Sign and conform to the inspection form/s once the inspection is conducted.</p>	<p>6.1 Receive the inspection sample once delivered to DOE-LATL-AES. Process the request through ERTLS-OSMS and indicate the start of inspection and the expected end date of the service.</p> <p>6.2 DOE-LATL-AES staff conducts inspection by accomplishing inspection form/s and takes photographs of the sample/s being inspected.</p> <p>6.3 DOE-LATL-AES staff compares generic model to its base model by conducting physical inspection to the actual base model brought by the client.</p>	<p>Corresponding fees should already have been paid in step 4</p>	<ul style="list-style-type: none"> <li>• Inspection of Air Conditioners – up to 5 units per 1 working day</li> <li>• Inspection of Refrigerators – up to 5 units per 1 working day</li> <li>• Inspection of Clothes Washer – up to 5 units per 1 working day</li> <li>• Inspection of Television – up to 5 units per 1 working day</li> </ul>	<p><i>Lab. Tech II / SRS I / SRS II / Sr. SRS, LATL</i></p> <p><i>Lab. Tech II / SRS I / SRS II / Sr. SRS, LATL</i></p>

	<p>6.4 If generic model is the same as its base model, the client will sign and conform the inspection forms.</p> <p><b>Note:</b> If found not generic to the base model, DOE-LATL-AES staff will inform the client and sign and conform the form.</p> <p>6.5 If the sample is requested for inspection of exempted product, DOE-LATL-AES staff verifies the sample if it is exempted or not.</p> <p><b>Note:</b> If found not to be exempted, DOE-LATL-AES staff informs the client and signs and conforms the inspection form.</p>			
<p>7. Wait for the completion of service of product being inspected.</p> <p><b>Note:</b></p> <p>a. Please refer to the corresponding days in the “Processing Time” column.</p> <p>b. Monitor the request through ERTLS-OSMS or wait for the</p>	<p>7.1 Prepare the individual inspection report, summary matrix of individual inspection report, and transmittal letter.</p> <p>7.2 Review and approve the individual inspection report, summary matrix of individual inspection report,</p>	N / A	3 Working Days	<p><i>Lab. Tech II / SRS I / SRS II / Sr. SRS, LATL</i></p> <p><i>Sr. SRS / Supv. SRS, LATL</i></p>

issuance / releasing of inspection report/s. The client may also call DOE-LATL-AES for updates on the status of service.	and transmittal letter.			
	7.3 Review and sign the transmittal letter.			<i>Chief SRS / Director, LATL</i>
	7.4 Upload the inspection report/s and transmittal letter to ERTLS-OSMS. Client will be notified in the ERTLS-OSMS once the inspection report/s and transmittal letter are ready for download.			<i>Lab. Tech II / SRS I / SRS II / Sr. SRS, LATL</i>
8. Fill-out the customer satisfaction form and download the inspection report and transmittal letter in ERTLS-OSMS then claim/retrieve the test sample/s at DOE-LATL-AES.	N / A	N / A	N / A	N / A
<b>Total Number of Days</b>		<b>5 Working Days</b>		



## \*Issuance of Calibration Certificate for Electrical, Temperature and Energy-Monitoring Instruments for External Customers

Calibration work is conducted to accommodate external customers. Services offered are calibration of Digital Power Meter (1Watt to 20KW) (up to 20A), Digital Multimeter (up to 1000V AC/DC) (up to 20A AC/DC), Resistance (up to 10GΩ), Platinum Resistance Thermometer (-10 to 420°C), Resistance Temperature Device (-10 to 420°C) and Thermocouple K, J, T, R, L, N.

<b>Office or Division:</b>	Lighting and Appliance Testing Laboratory (LATL)			
<b>Classification:</b>	Highly Technical Transaction			
<b>Type of Transaction:</b>	Government-2-Citizen, Government-2-Government, Government-2-Business			
<b>Who May Avail:</b>	Private companies, industries, academe, government institutions			
<b>CHECKLIST OF REQUIREMENTS</b>		<b>WHERE TO SECURE</b>		
1. Approved registration to ERTLS-OSMS		Client to register to ERTLS-OSMS website ( <a href="https://ertls-osms.doe.gov.ph/">https://ertls-osms.doe.gov.ph/</a> )		
2. Filled out service request in ERTLS-OSMS website		Client to fill out service request in ERTLS-OSMS website		
3. One (1) uploaded/scanned copy of Approved Order of Payment		To be uploaded by ERTLS-LATL-CIC to ERTLS-OSMS website once service request is reviewed		
4. Calibration Fee/s and one (1) uploaded/scanned copy of proof of payment		Client to upload proof of payment to ERTLS-OSMS website.		
5. Equipment for calibration, accessories, original/photocopy of equipment manual if available		To be submitted/sent by the client to DOE-ERTLS-LATL-CIC		
6. Filled out Customer Satisfaction in ERTLS-OSMS website		Client to fill out customer satisfaction in ERTLS-OSMS to download Calibration Certificate		
<b>CLIENT STEPS</b>	<b>AGENCY ACTIONS</b>	<b>FEES TO BE PAID</b>	<b>PROCESSING TIME</b>	<b>PERSON RESPONSIBLE</b>
1. Register to ERTLS-OSMS (Energy Research and Testing Laboratory Services – Online Service Management System)	1.1. Assist client in registration to ERTLS-OSMS  Note: If client brings their equipment for walk-in application, staff conducts	N / A	N / A	<i>Lab. Tech II / Science Research Specialist, Lighting and Appliance Testing Laboratory</i>

<p>Note:</p> <p>a. Client registers to ERTLS-OSMS only once;</p> <p>b. If the client is already registered, skip this step, and proceed to client step no. 2;</p> <p>c. The registration of the client to ERTLS-OSMS is beyond LATL control and is not included in the normal processing time;</p> <p>d. Client may prefer to call beforehand to check if LATL can calibrate their equipment. Client may also bring their equipment for walk-in application but will also be instructed to register and request service through ERTLS-OSMS</p>	<p>functionality check of equipment for calibration. During functionality check, if the equipment is malfunctioning, not operating properly or has physical damages, DOE-LATL-CIC will not process the service request and decline from calibrating the equipment.</p>			
<p>2. Request calibration services by filling out service request form through ERTLS-OSMS</p> <p>Note:</p> <p>a. Upload photos or videos of equipment to be calibrated.</p> <p>b. If ERTLS-OSMS is not working (i.e., system malfunction, server down, etc.), LATL will revert to manual receiving and processing of calibration requests.</p>	<p>1.2. Review and approve the customer registration</p>		<p>4 Hours</p>	<p><i>Chief SRS, LATL</i></p>
	<p>2.1 Receive the request of the customer through ERTLS-OSMS</p> <p>2.2 Review the service request</p>			<p><i>Lab. Tech II / SRS I / SRS II / Sr. SRS / Supv. SRS, LATL</i></p>
				<p><i>SRS I / SRS II / Sr. SRS / Supv. SRS, LATL</i></p>

3. Request for order of payment (OoP) through ERTLS-OSMS	3.1. Receive the request for OoP through ERTLS-OSMS			Lab. Tech II / SRS I / SRS II / Sr. SRS / Supv. SRS, LATL
	3.2. Prepare OoP through Collection Monitoring System (COMS). Print out hard copy of the OoP.			Lab. Tech II / SRS I / SRS II / Sr. SRS / Supv. SRS, LATL
	3.3. Approve OoP			Sr. SRS / Supv. SRS / Chief SRS, LATL
	3.4. Upload the approved OoP to ERTLS-OSMS			Sr. SRS / Supv. SRS, LATL
4. Pay calibration fee/s to DOE treasury through ERTLS-OSMS	4.1. Verify payment through ERTLS-OSMS	<p>Note:</p> <p><i>Electrical calibration – 5 points per parameter</i></p> <p><i>Temperature calibration – 5 points</i></p> <ul style="list-style-type: none"> <li>➤ Calibration of Digital Power Meter (DPM) Php 4,900.00</li> <li>• Calibration of each additional point for DPM Php 350.00</li> <li>➤ Calibration of Digital Multimeter (DMM) up to 4 ½ Digital Resolution Php 3,250.00 (5</li> </ul>	<p>4 Hours</p> <p>Note: There are cases where client is unable to pay at once after the approval of OoP hence, duration is beyond DOE control; The duration of the process will resume once the payment has been made.</p>	Collection Officer, Treasury Division

		<p>points per parameter)</p> <ul style="list-style-type: none"> <li>• Calibration of each additional point for DMM Php 200.00</li> <li>➤ Calibration of AC/DC Voltmeters Php 1,950.00</li> <li>• Calibration of each additional point for AC/DC Voltmeters Php 390.00</li> <li>➤ Calibration of AC/DC Ammeters Php 2,100.00</li> <li>• Calibration of each additional point for AC/DC Ammeters Php 420.00</li> <li>➤ Calibration of Ohmmeter Php 1,950.00</li> <li>• Calibration of each additional point for Ohmmeter Php 390.00</li> <li>➤ Calibration of Resistors Php 1,350.00</li> <li>• Calibration of each additional point for Resistors Php 300.00</li> <li>➤ Calibration of Clamp Meters Php 2,050.00</li> </ul>		
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		<ul style="list-style-type: none"> <li>• Calibration of each additional point for Clamp Meter Php 410.00</li> <li>➤ Calibration of Platinum Resistance Thermometer (PRT) Php 4,900.00</li> <li>• Calibration of each additional temperature point for PRT Php 980.00</li> <li>➤ Calibration of Liquid-in-Glass (LIG) Thermometer Php 1,650.00</li> <li>• Calibration of each additional temperature point for Liquid-in-Glass (LIG) Php 600.00</li> <li>➤ Calibration of Digital / Bi-metal Thermometer / RTD / Thermocouple Php 1,950.00</li> <li>• Calibration of each additional temperature point Php 390.00</li> </ul>		
	4.2. Approve the service request	N / A		<i>Chief SRS, LATL</i>
5. Bring/send equipment for calibration to DOE-LATL-CIC	5.1. Wait for the equipment to arrive to LATL-CIC	Client to be responsible of logistic	Depending on the customer	<i>Lab. Tech II / SRS I / SRS II / Sr. SRS, Supv. SRS,</i>

		arrangements and fees		LATL
	5.2. Receive the equipment for calibration and conduct functionality check	N / A	4 Hours	
<p>6. Wait for the completion of calibration services.</p> <p>Note:</p> <p>a. Please refer to the corresponding days in the “Processing Time” column.</p> <p>b. Monitor the request through ERTLS-OSMS or wait for DOE-LATL’s advice/notice for the issuance / releasing of Calibration Certificate/s. The client may also call DOE-LATL for updates on the status of service.</p>	<p>6.1. Process the request through ERTLS-OSMS and indicate date of start of calibration and the expected end date of the service</p> <p>6.2. Conduct calibration</p>	<p>Corresponding fees should already have been paid in step 4 according to the type of appliance / testing / service requested</p>	<p><b>Electrical Instruments</b></p> <ul style="list-style-type: none"> <li>• DPM – 1.5 Working Days (5 points per parameter)</li> <li>• DMM – 1.5 Working Days (5 points per parameter)</li> <li>• AC/DC Voltmeters – 1.5 Working Days (5 points per parameter)</li> <li>• AC/DC Ammeters – 1.5 Working Days (5 points per parameter)</li> <li>• Ohmmeter – 1.5 Working Days (5 points per parameter)</li> <li>• Resistors – 1.5 Working Days (5 points per parameter)</li> <li>• Clamp Meter – 1.5 Working Days (5 points per parameter)</li> </ul> <p><b>Temperature Instruments</b></p>	<p>Lab. Tech II / SRS I / SRS II / Sr. SRS, Supv. SRS, LATL</p>

			<ul style="list-style-type: none"> <li>• PRT – 2 Working Days per 5 points</li> <li>• RTD – 2 Working Days per 5 points</li> <li>• LIG – 2 Working Days per 5 points</li> </ul> Thermocouple – 2 Working Days per 5 points	
	6.3. Compute for measurement uncertainty		1 Working Day and 4 hours	<i>SRS I / SRS II / Sr. SRS / Supv. SRS, LATL</i>
	6.4. Prepare calibration certificate		1 Working Day	<i>SRS I / SRS II / Sr. SRS / Supv. SRS, LATL</i>
	6.5. Review and approve calibration certificate			<i>Sr. SRS / Supv. SRS / Chief SRS, LATL</i>
	6.6. Upload calibration certificate to ERTLS-OSMS. Client will be notified in the ERTLS-OSMS once the calibration certificate is ready for download.		1 Working Day	<i>SRS I / SRS II / Sr. SRS / Supv. SRS, LATL</i>
7. Fill out customer satisfaction form and download the Calibration Certificate in ERTLS-OSMS then claim/retrieve the calibrated equipment at LATL-CIC	N / A	N / A	N / A	N / A
<b>Total Number of Days</b>		<b>Electrical Instruments – 6.5 Working Days Temperature Instruments – 7 Working Days</b>		



## \*Issuance of Energy Performance Test Report for Lighting Products and Other Devices

Tests, among others, are conducted in support of the Philippine Energy Labelling Program (PELP) as well as in support of the research and development activities of local manufacturers, lighting application companies, importers, the industry sector, academe, and government institutions. The testing covers either the photometric or electrical characteristics of the test samples or both the photometric and electrical characteristics of the test samples.

<b>Office or Division:</b>	Lighting and Appliance Testing Laboratory (LATL)			
<b>Classification:</b>	Highly Technical Transaction			
<b>Type of Transaction:</b>	Government-2-Citizen, Government-2-Government, Government-2-Business			
<b>Who May Avail:</b>	Local manufacturers, appliance industry players, importers, academe, government institutions and other stakeholders			
<b>CHECKLIST OF REQUIREMENTS</b>		<b>WHERE TO SECURE</b>		
1. Approved registration to ERTLS-OSMS		Client to register to ERTLS-OSMS website ( <a href="https://ertls-osms.doe.gov.ph/">https://ertls-osms.doe.gov.ph/</a> )		
2. Filled out service request in ERTLS-OSMS website		Client to fill out service request in ERTLS-OSMS website		
3. One (1) uploaded/scanned copy of Approved Order of Payment		To be uploaded by ERTLS-LATL-LOD to ERTLS-OSMS website once service request is reviewed		
4. Testing Fee/s and one (1) uploaded/scanned copy of proof of payment		Client to upload proof of payment to ERTLS-OSMS website.		
5. Test Sample/s		To be submitted/sent to ERTLS-LATL-LOD by the client		
6. Filled out Customer Satisfaction in ERTLS-OSMS website		Client to fill out customer satisfaction in ERTLS-OSMS to download Test Reports		
<b>CLIENT STEPS</b>	<b>AGENCY ACTIONS</b>	<b>FEES TO BE PAID</b>	<b>PROCESSING TIME</b>	<b>PERSON RESPONSIBLE</b>
1. Register to ERTLS-OSMS (Energy Research and Testing Laboratory Services – Online Service Management System)	1.1. Assist client in registration to ERTLS-OSMS  Note: When a client brings their sample(s) for walk-in application, our staff will inspect them to ensure they are suitable for	N/A	N/A	<i>Lab. Tech II / SRA/SRS I/SRS II, Lighting and Appliance Testing Laboratory</i>

<p>Note:</p> <p>a. Client registers to ERTLS-OSMS only once;</p> <p>b. If the client is already registered, skip this step, and proceed to client step no. 2;</p> <p>c. The registration of the client to ERTLS-OSMS is beyond LATL control and is not included in the normal processing time;</p> <p>d. For special cases of testing, client may prefer to call beforehand to check if LATL can render the service. Client may also bring the test sample for walk-in application but will also be instructed to register and request service through ERTLS-OSMS.</p>	<p>testing. If any indications of mishandling or other factors that could impact the test's accuracy are detected, DOE-LATL-LOD will reject the service request. The client may submit a new request once they have rectified and resubmitted the defective sample(s).</p>			
<p>2. Request for Energy Performance Testing of Lighting Products and other Electrical Devices by submitting a Service Request</p>	<p>1.2. Review and approve the Client Registration</p> <p>2.1. Receive the request of the customer through ERTLS-OSMS</p>		<p>4 Hours</p>	<p><i>Chief SRS, LATL</i></p> <p><i>Lab. Tech II / SRA/SRS I/SRS II/ Sr. SRS/Supv. SRS, LATL</i></p>

<p>by filling out the Service Request Form (SRF) through ERTLS-OSMS.</p> <p>Note:</p> <p>c. Upload photos or videos of equipment to be tested</p> <p>d. If ERTLS-OSMS is not working (i.e., system malfunction, server down, etc.), LATL will revert to manual receiving and processing of service requests.</p>	<p>2.2. Review the Service Request</p>			<p><i>SRA/SRS I/SRS II, Sr. SRS/ Supv. SRS,LATL</i></p>
<p>3. Request for order of payment (OoP) through ERTLS-OSMS</p>	<p>3.1. Receive the request for OoP through ERTLS-OSMS</p>			<p><i>Lab. Tech II / SRA/SRS I/SRS II, Sr. SRS/Supv. SRS, LATL</i></p>
	<p>3.2. Prepare OoP through Collection Monitoring System (COMS). Print out a hard copy of the OoP.</p>			<p><i>Lab. Tech II / SRA/SRS I/SRS II, Sr. SRS/Supv. SRS, LATL</i></p>
	<p>3.3. Approve OoP</p>			<p><i>Lab. Tech II / SRA/SRS I/SRS II, Sr. SRS/Supv. SRS, LATL</i></p>
	<p>3.4. Upload the approved OoP to ERTLS-OSMS</p>			<p><i>Sr. SRS/Supv. SRS, LATL</i></p>
<p>4. Pay testing fee/s to DOE Treasury through ERTLS-OSMS</p>	<p>4.1. Verify payment through ERTLS-OSMS</p>	<p>➤ Gonio Photometry –</p>	<p>4 Hours</p> <p>Note: There are cases where client is unable to</p>	<p><i>Collection Officer, Treasury Division</i></p>

		<p><b>Php 11,600.00/ sample</b></p> <ul style="list-style-type: none"> <li>➤ Sphere Photometry/ Lighting Products and other Devices – <b>Php 740.00/ sample</b></li> <li>➤ Electrical Measurement - <b>Php 440.00/ Batch</b></li> <li>➤ Endurance Test – Temperature Cycling Test – <b>Php 10,800.00/ Batch</b></li> <li>➤ Endurance Test – Supply Switching Test – <b>Php 2,200.00/ Batch</b></li> <li>➤ 10W-22W LFL and CFL Life Test (1,900 hrs) – <b>Php 11,580.00/ Batch</b></li> <li>➤ 10W-22W LFL and CFL Lumen Maintenance– <b>Php 19,200.00/ Batch</b></li> <li>➤ 10W-22W LFL and CFL Life Test every next</li> </ul>	<p>pay at once after the approval of OoP hence, duration is beyond DOE control; The duration of the process will resume once the payment has been made.</p>	
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		<p>1,000 hrs – <b>Php 2,200.00/ Batch</b></p> <ul style="list-style-type: none"> <li>➤ 10W-22W LFL and CFL Photometric with Ageing– <b>Php 10,500.00/ Batch</b></li> <li>➤ 23W-32W LFL and CFL Life Test (100 hrs) – <b>Php 7,720.00/ Batch</b></li> <li>➤ 23W-32W LFL and CFL Life Test (1,900 hrs) – <b>Php 13,480.00/ Batch</b></li> <li>➤ 23W-32W LFL and CFL Lumen Maintenance – <b>Php 21,200.00/ Batch</b></li> <li>➤ 23W-32W LFL and CFL Life Test every next 1,000 hrs – <b>Php 3,200.00/ Batch</b></li> <li>➤ 33W-40W LFL and CFL Life Test (100 hrs) – <b>Php 7,800.00/ Batch</b></li> <li>➤ 33W-40W LFL and CFL Life</li> </ul>		
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		<p>Test (1,900 hrs)– <b>Php 15,000.00/ Batch</b></p> <ul style="list-style-type: none"> <li>➤ 33W-40W LFL and CFL Lumen Maintenance - <b>Php 22,800.00/ Batch</b></li> <li>➤ 33W-40W LFL and CFL Life Test every next 1,000 hrs– <b>Php 4,000.00/ Batch</b></li> <li>➤ Other Light Sources above 40W-100W @ 100 hrs Life Test -<b>Php 8,400.00/ Batch</b></li> <li>➤ Other Light Sources above 40W-100W @ 1,900 hrs Life Test-<b>Php 26,400.00/ Batch</b></li> <li>➤ Other Light Sources above 40W-100W Lumen Maintenance - <b>Php 34,800.00/ Batch</b></li> <li>➤ Other Light Sources above 40W-100W @ Life</li> </ul>		
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		<p>Test at every 1,000 hrs -<b>Php 10,000.00/ Batch</b></p> <ul style="list-style-type: none"> <li>➤ Other Light Sources above 100W-200W @ 100 hrs Life Test -<b>Php 9,400.00/ Batch</b></li> <li>➤ Other Light Sources above 100W-200W @ 1,900 hrs Life Test-<b>Php 45,400.00/ Batch</b></li> <li>➤ Other Light Sources above 100W-200W Lumen Maintenanc-<b>Php 54,800.00/ Batch</b></li> <li>➤ Other Light Sources above 100W-200W @ Life Test at every 1,000 hrs-<b>Php 20,000.00/ Batch</b></li> </ul>		
	4.2. Approve the service request	N/A		<i>Chief SRS, LATL</i>
5. Bring/send test samples to DOE-LATL-LOD Test Facility	5.1. Wait for the test sample to arrive at LATL-LOD Test Facility	The client is responsible for arranging and covering the costs of logistics.	Depending on the client	<i>Lab. Tech II / SRA/SRS I/SRS II, Sr. SRS/Supv. SRS, LATL</i>

<p>Note: Clients can choose to send their test sample(s) to the DOE-LATL-LOD Test facility by either physical delivery or using a courier service</p>	<p>5.2. Receive the Test sample(s)</p> <p>Note: DOE-LATL-LOD will examine the received test sample(s) to confirm their suitability for testing. If any signs of mishandling or other factors that could influence the accuracy of the test are identified, the client will be notified promptly to submit a new test sample(s)</p>	<p>N/A</p>	<p>4 Hours</p>	
<p>6. Wait for the completion of services of the product being tested.</p> <p>Note: a. Please refer to the corresponding days in the "Processing Time" column b. Monitor the request through ERTLS-OSMS or wait for DOE-LATL-LOD section advice/notice for the issuance of the Test Report. The client may also call DOE-LATL-LOD section for updates on the status of service.</p>	<p>6.1. Process the request through ERTLS-OSMS and indicate the date of start of testing and the expected end date of the service</p>	<p>Corresponding fees should already have been paid in step 3 according to the type of appliance/testing/service requested</p>	<p>N/A</p>	
	<p>6.2. Conduct the Test Request</p>			
	<p>6.2.1. Electrical and Photometric Characteristics of Omni-directional light sources zero ageing</p>		<p>1 Working Day/ Sample</p>	
	<p>6.2.2. Electrical and Photometric Characteristics of Omni-directional light sources initial rating test with 100 hours ageing</p>		<p>5 Working Days/ Sample 25 Calendar Days/ Batch of 20</p>	
	<p>6.2.3. 2,000 hours Lumen Maintenance test for fluorescent lamps</p>		<p>111 Calendar Days/ Batch of 20</p>	
<p>6.2.4. Life Test for fluorescent lamps</p>	<p>293 Calendar Days/ Batch of 20</p>			

			<p><b>Note:</b> The duration of the test is based on the rated lamp life declared by the client.</p>	
	6.2.5. Electrical and Photometric Characteristics luminaires		1 Working Day/ Sample	
	6.2.6. Electrical and Photometric Characteristics Roadway / Streetlights		1 Working Day/ Sample	
	6.2.7. Electrical and Photometric Characteristics of Floodlights/ Parabolic Reflectorized Reflector (PAR) lamps		1 Working Day/ Sample	
	6.2.8. Endurance Test – Supply Switching Test (SST)		<p>13 – 28 Calendar Days/ Batch of 10</p> <p><b>Note:</b> No. of days is dependent on the rated life of the test sample</p>	
	6.2.9. Endurance Test-Temperature Cycling Test (TCT)		52 Working Days /Batch of 10	
	6.2.10. LED Lamps Lumen Maintenance		<p>177 to 270 Calendar Days/ Batch of 20</p> <p>Note: No. of days is dependent on the Rated Lamp Life</p>	

	6.2.11. Electrical Measurements (Other Electrical Devices)		1 Working Day/ Sample	
	6.3. Prepare and generate Test Report/s		1 Working Day	<i>Lab. Tech II/ SRA/SRS I/SRS II</i>
	6.4. Review and Approve Test Report/s, and prepares transmittal letter		1 Working Day and 4 Hours	<i>Sr. SRS/Supv. SRS, LATL</i>
	6.5. Approves and sign the transmittal letter			<i>Chief SRS/ Director, LATL</i>
	6.6. Upload test report and transmittal letter to ERTLS-OSMS. Client will be notified in the ERTLS-OSMS once the test report and transmittal letter are ready for download.			<i>SRS I / SRS II / Sr. SRS / Supv. SRS, LATL</i>
7. Fill out the Customer Satisfaction Form (CSF) and download the Test Report in ERTLS-OSMS then claim/retrieve the test sample at DOE-LATL-LOD	N/A	N/A	N/A	N/A
<b>Performance Tests</b>		<b>Total Number of Days</b>		
Electrical and photometric characteristics of Omni-directional light sources zero ageing		5 Working Days/Sample		
Electrical and photometric characteristics of Omni-directional light sources initial rating test with 100 hours ageing		9 Calendar Days/Sample 29 Calendar Days/Batch of 20		

2,000 hours lumen maintenance test for fluorescent lamps/Batch of 20	115 Calendar Days/Batch of 20
Life Test for fluorescent lamps	297 Calendar Days/Batch <b>Note:</b> The total number of days duration is based on the rated lamp life declared by the client.
Electrical and photometric characteristics luminaires	5 Working Days/Sample
Electrical and photometric characteristics Roadway/Streetlights	5 Working Days/Sample
Electrical and photometric characteristics of Floodlights/ Parabolic Reflectorized Reflector (PAR) lamps	5 Working Days/Sample
Endurance Test – Supply Switching Test (SST)/Batch of 10	17 to 32 Calendar Days/Batch <b>Note:</b> No. of days is dependent on the rated life of the test sample
Endurance Test – Temperature Cycling Test (TCT)/Batch of 10	56 Calendar Days/Batch
LED lamps lumen maintenance/Batch of 20	181 to 274 Calendar Days/Batch <b>Note:</b> No. of days is dependent on the Rated Lamp Life
Electrical Measurements (Other Electrical Devices)	5 Working Days/Sample



## \*Issuance of Energy Performance Test Report for Appliance and Equipment

Tests, among others, are conducted in support of the National Government's ES&L program as well as in support of the research and development activities of local manufacturers, appliance industry players, importers, academe, government institutions and other stakeholders. The scope of testing are air conditioners, refrigerators, clothes washing machines and television sets.

<b>Office or Division:</b>	Lighting and Appliance Testing Laboratory (LATL)			
<b>Classification:</b>	Highly Technical Transaction			
<b>Type of Transaction:</b>	Government-2-Citizen / Government-2-Government / Government-2-Business			
<b>Who May Avail:</b>	Local manufacturers, appliance industry players, importers, academe, government institutions and other stakeholders			
<b>CHECKLIST OF REQUIREMENTS</b>		<b>WHERE TO SECURE</b>		
1. Approved registration to ERTLS-OSMS		Client to register to ERTLS-OSMS website ( <a href="https://ertls-osms.doe.gov.ph/">https://ertls-osms.doe.gov.ph/</a> )		
2. Filled out service request in ERTLS-OSMS website		Client to fill out service request in ERTLS-OSMS website		
3. One (1) uploaded/scanned copy of Approved Order of Payment		To be uploaded by ERTLS-LATL-AES to ERTLS-OSMS website once service request is reviewed		
4. Testing Fee/s and one (1) uploaded/scanned copy of proof of payment		Client to upload proof of payment to ERTLS-OSMS website.		
5. Test Sample/s		To be submitted/sent by the client to DOE-ERTLS-LATL-AES		
6. Filled out Customer Satisfaction in ERTLS-OSMS website		Client to fill out customer satisfaction in ERTLS-OSMS to download Test Reports		
<b>CLIENT STEPS</b>	<b>AGENCY ACTIONS</b>	<b>FEES TO BE PAID</b>	<b>PROCESSING TIME</b>	<b>PERSON RESPONSIBLE</b>
1 Register to ERTLS-OSMS (Energy Research and Testing Laboratory Services – Online Service Management System). <b>Note:</b>	1.1 Assist client in ERTLS-OSMS registration. <b>Note:</b> For special cases of testing, client may prefer to call beforehand to check if LATL	N / A	N / A	<i>Lab. Tech II / Science Research Analyst / Science Research Specialist I / Science Research Specialist II / Senior Science Research Specialist, Lighting and Appliance Testing Laboratory</i>

<p>a. Client registers to ERTLS-OSMS only once;</p> <p>b. If the client is already registered, skip this step, and proceed to client step no. 2.</p> <p>c. The registration of the client to ERTLS-OSMS is beyond LATL control and is not included in the normal processing time;</p> <p>d. Client may also bring the test sample for walk-in application but will also be instructed to register and request service through ERTLS-OSMS</p>	<p>can render the service.</p>			
<p>2 Request testing service by filling-out service request form through ERTLS-OSMS.</p> <p><b>Note:</b></p> <p>a. Client must upload photo/media of test sample/s.</p> <p>b. If ERTLS-OSMS is not working (i.e., system malfunction, server down, etc.), LATL will revert to manual receiving and processing of testing request/s.</p>	<p>1.2 Review and approve customer registration.</p>			<p>Chief SRS, LATL</p>
	<p>2.1 Receive the request of client through ERTLS-OSMS.</p> <p>2.2 Review the service request.</p>	<p>N / A</p>	<p>4 Hours</p>	<p>Lab. Tech II / SRS I / SRS II / Sr. SRS, LATL</p> <p>Lab. Tech II / SRS I / SRS II / Sr. SRS, LATL</p>



3 Request for Order of Payment (OoP) through ERTLS-OSMS.	3.1 Receive the request for OoP from client through ERTLS-OSMS.	N / A		<i>Lab. Tech II / SRS I / SRS II / Sr. SRS, LATL</i>
	3.2 Prepare OoP through Collection Monitoring System (COMS). Print out hard copy of the OoP.			<i>Lab. Tech II / SRS I / SRS II / Sr. SRS, LATL</i>
	3.3 Approve the OoP.			<i>Sr. SRS / Supv. SRS / Chief SRS, LATL</i>
	3.4 Upload the approved OoP to ERTLS-OSMS.			<i>Sr. SRS / Supv. SRS, LATL</i>
4. Pay testing fee/s to DOE Treasury through ERTLS-OSMS.	4.1 Verify payment through ERTLS-OSMS.	<ul style="list-style-type: none"> <li>• Testing of Air Conditioner (Full load) <b>Php 12,400.00</b></li> <li>• Testing of Air Conditioner (Half load) <b>Php 12,400.00</b></li> <li>• Testing of Clothes Washer <b>Php 21,400.00</b></li> <li>• Testing of Refrigerator – Complete Test <b>Php 24,000.00</b></li> <li>• Testing of Refrigerator – Partial Test <b>Php 14,200.00</b></li> <li>• Ice Making Test (Optional) <b>Php 10,000.00</b></li> <li>• Freezing Capacity (Optional) <b>Php 10,000.00</b></li> <li>• Testing of Television <b>Php 4,700.00</b></li> </ul>	<p style="text-align: center;"><b>4 Hours</b></p> <p>Note: There are cases where client is unable to pay at once after the approval of OoP hence, duration is beyond DOE control; The duration of the process will resume once the payment has been made.</p>	<i>Collection Officer, Treasury Division</i>
	4.2 Approve the service request.	N / A		

<p>5. Bring/send the test sample/s to DOE-LATL-AES.</p> <p><b>Note:</b> a. Client shall ensure that the delivered test sample/s is working properly. b. DOE-LATL-AES is not liable for any damage on test sample/s during logistics.</p>	<p>5.1. Wait for the test sample/s to be delivered in DOE-LATL-AES.</p>	<p>Client is responsible for logistic arrangements and fees</p>	<p>Depends on client</p>	<p><i>Lab. Tech II / SRS I / SRS II / Sr. SRS, LATL</i></p>
<p>6. Wait for the completion of service of product being tested.</p> <p><b>Note:</b> a. Please refer to the corresponding number of days in the “Processing Time” column. b. Monitor the request through ERTLS-OSMS or wait for DOE-LATL-AES advice/notice for the issuance / releasing of test report/s. The client may also call DOE-LATL-AES for updates on the status of service.</p>	<p>6.1. Receive the test sample once delivered to DOE-LATL-AES. Process the request through ERTLS-OSMS and indicate the date of start of testing and the expected end date of the service.</p>	<p>Corresponding fees should already have been paid in step 4 according to the type of appliance / testing / service requested</p>	<ul style="list-style-type: none"> <li>• Testing of Air Conditioners – 1 unit per 1 working day (fixed type)</li> <li>• Testing of Air Conditioners- 1 unit per 2 working days (variable type)</li> <li>• Testing of Clothes Washer – 4 units per 7 working days</li> <li>• Testing of Television – 4 units per 1 working day</li> <li>• Refrigerator storage temperature test – 1 Unit- 10 working days.</li> <li>• Refrigerator energy consumption test – 1 unit- 18 working days.</li> <li>• Refrigerator freezing capacity test – 1 unit- 5 working days.</li> <li>• Refrigerator ice-making test – 1 unit - 5 working days.</li> </ul>	<p><i>Lab. Tech II / SRS I / SRS II / Sr. SRS, LATL</i></p>
<p>6.2. Conduct of energy performance test/s.</p> <p><b>Note:</b> For split type air conditioner, the customer shall bring their own technician to install the unit in DOE-LATL-AES.</p>	<p><i>Lab. Tech II / SRS I / SRS II / Sr. SRS, LATL</i></p>			

<p>6.3 Prepare the test report/s and transmittal letter.</p>	<p>N / A</p>	<ul style="list-style-type: none"> <li>• Testing of Air Conditioners – 1 unit per 1 working day</li> <li>• Testing of Clothes Washer – 2 working days per unit</li> <li>• Testing of Television – 1 working day per unit</li> <li>• Testing of Refrigerator– 1 working day per unit per type of test</li> </ul>	<p><i>Lab. Tech II / SRS I / SRS II / Sr. SRS, LATL</i></p>
<p>6.4 Review and approve the test report/s and review transmittal letter.</p>		<p>1 Working Day</p>	<p><i>Sr. SRS / Supv. SRS, LATL</i></p>
<p>6.5 Review and sign the transmittal letter.</p>		<p>1 Working Day</p>	<p><i>Chief SRS / Director, ERTLS-LATL</i></p>
<p>6.6 Upload the test report/s and transmittal letter to ERTLS-OSMS. Client will be notified in the ERTLS-OSMS once the test report and transmittal letter are ready for download</p>		<p>4 Hours</p>	<p><i>Lab. Tech II / SRS I / SRS II / Sr. SRS / Supv. SRS, LATL</i></p>

7. Fill-out the customer satisfaction form and download the test report and transmittal letter in ERTLS-OSMS then claim/retrieve the test sample/s at DOE-LATL-AES.	N / A	N / A	N / A	N / A
<b>Appliance</b>			<b>Total Number of Days</b>	
Air Conditioner (fixed speed)			5.5 Working Days	
Air Conditioner (variable speed)			6.5 Working Days	
Television			5.5 Working Days	
Clothes Washer			12.5 Working Days	
Refrigerator (Energy Consumption Test and Load Processing)			22.5 Working Days	
Refrigerator (Storage Temperature Test)			14.5 Working Days	
Refrigerator (with Freezing Capacity Test)			9.5 Working Days	
Refrigerator (with Ice-Making Test)			9.5 Working Days	



# INTERNAL SERVICES



## Issuance of Calibration Certificate for Electrical, Temperature and Energy-Monitoring Instruments for Internal Customers

Calibration work is conducted to address the calibration requirements of LATL and to accommodate internal customers. Services offered are calibration of Digital Power Meter (1Watt to 20KW) (up to 20A), Digital Multimeter (up to 1000V AC/DC) (up to 20A AC/DC), Resistance (up to 10GΩ), Platinum Resistance Thermometer (-10 to 420°C), Resistance Temperature Device (-10 to 420°C) and Thermocouple K, J, T, R, L, N.

<b>Office or Division:</b>	Lighting and Appliance Testing Laboratory (LATL)			
<b>Classification:</b>	Highly Technical Transaction			
<b>Type of Transaction:</b>	Government-2-Citizen, Government-2-Government, Government-2-Business			
<b>Who May Avail:</b>	Government institutions, ERTLS, EUMB			
<b>CHECKLIST OF REQUIREMENTS</b>		<b>WHERE TO SECURE</b>		
1. Approved registration to ERTLS-OSMS		Client to register to ERTLS-OSMS website ( <a href="https://ertls-osms.doe.gov.ph/">https://ertls-osms.doe.gov.ph/</a> )		
2. Filled out service request in ERTLS-OSMS website		Client to fill out service request in ERTLS-OSMS website		
3. Equipment for calibration, accessories, original/photocopy of equipment manual if available		To be submitted/sent by the client to DOE-ERTLS-LATL-CIC		
<b>CLIENT STEPS</b>	<b>AGENCY ACTIONS</b>	<b>FEES TO BE PAID</b>	<b>PROCESSING TIME</b>	<b>PERSON RESPONSIBLE</b>
1. Register to ERTLS-OSMS (Energy Research and Testing Laboratory Services – Online Service Management System)  Note: a. Client registers to ERTLS-OSMS only once;	1.1. Assist client in registration to ERTLS-OSMS  Note: If client brings their equipment for walk-in application, staff conducts functionality check of equipment for calibration.	None	N / A	<i>Lab. Tech II /            Science Research Specialist,            Lighting and Appliance Testing Laboratory</i>

<p>b. If the client is already registered, skip this step, and proceed to client step no. 2;</p> <p>c. The registration of the client to ERTLS-OSMS is beyond LATL control and is not included in the normal processing time;</p> <p>d. Client may prefer to call beforehand to check if LATL can calibrate their equipment. Client may also bring their equipment for walk-in application but will also be instructed to register and request service through ERTLS-OSMS.</p>	<p>During functionality check, if the equipment is malfunctioning, not operating properly or has physical damages, DOE-LATL-CIC will not process the service request and decline from calibrating the equipment.</p>			
<p>2. Request calibration services by filling out service request form through ERTLS-OSMS</p> <p>Note:</p> <p>a. Upload photos or videos of equipment to be calibrated.</p> <p>b. If ERTLS-OSMS is not working (i.e., system malfunction, server down, etc.), LATL will revert to manual</p>	<p>1.2. Review and approve the customer registration</p>		<p>4 Hours</p>	<p>Chief SRS, LATL</p>
	<p>2.1 Receive the request of the customer through ERTLS-OSMS</p>			<p>Lab. Tech II / SRS I / SRS II / Sr. SRS / Supv. SRS, LATL</p>
	<p>2.2 Review the service request</p>			<p>SRS I / SRS II / Sr. SRS / Supv. SRS, LATL</p>

receiving and processing of calibration requests.	2.3 Approve the service request			Chief SRS, LATL
3. Bring/send equipment for calibration to DOE-LATL-CIC.	3.1 Wait for the equipment to arrive to LATL-CIC	Client to be responsible of logistic arrangements and fees	Depending on the customer	Lab. Tech II / SRS I / SRS II / Sr. SRS, Supv. SRS, LATL
	3.2 Receive the equipment for calibration and conduct functionality check	None	4 Hours	
4. Wait for the completion of calibration services.  Note: a. Please refer to the corresponding days in the "Processing Time" column. b. Monitor the request through ERTLS-OSMS or wait for DOE-LATL's advice/notice for the issuance / releasing of Calibration Certificate/s. The client may also call DOE-LATL for updates on the status of service.	4.1 Process the request through ERTLS-OSMS and indicate date of start of calibration and the expected end date of the service	None	<b>Electrical Instruments</b> <ul style="list-style-type: none"> <li>• DPM – 1.5 Working Days (5 points per parameter)</li> <li>• DMM – 1.5 Working Days (5 points per parameter)</li> <li>• AC/DC Voltmeters – 1.5 Working Days (5 points per parameter)</li> <li>• AC/DC Ammeters – 1.5 Working Days (5 points per parameter)</li> <li>• Ohmmeter – 1.5 Working Days (5 points per parameter)</li> <li>• Resistors – 1.5 Working Days (5 points per parameter)</li> <li>• Clamp Meter – 1.5 Working Days</li> </ul>	
	4.2 Conduct calibration			



			(5 points per parameter)	
			<b>Temperature Instruments</b> <ul style="list-style-type: none"> <li>• PRT – 2 Working Days per 5 points</li> <li>• RTD – 2 Working Days per 5 points</li> <li>• LIG – 2 Working Days per 5 points</li> <li>• Thermocouple – 2 Working Days per 5 points</li> </ul>	
	4.3 Compute for measurement uncertainty		1 working day and 4 Hours	<i>SRS I / SRS II / Sr. SRS / Supv. SRS, LATL</i>
	4.4 Prepare calibration certificate		1 Working Day	<i>SRS I / SRS II / Sr. SRS / Supv. SRS, LATL</i>
	4.5 Review and approve calibration certificate			<i>Sr. SRS / Supv. SRS / Chief SRS, LATL</i>
	4.6 Upload calibration certificate to ERTLS-OSMS. Client will be notified in the ERTLS-OSMS once the calibration certificate is ready for download.		1 Working Day	<i>SRS I / SRS II / Sr. SRS / Supv. SRS, LATL</i>
5. Fill out customer satisfaction form and download the Calibration Certificate in ERTLS-OSMS then	N / A	N / A	N / A	N / A

claim/retrieve the calibrated equipment at LATL-CIC				
<b>Total Number of Days</b>		<b>Electrical Instruments – 6 Working Days Temperature Instruments – 6.5 Working Days</b>		



## \*Issuance of Chemical / Geological Laboratory Test Report

Testing of upstream and downstream petroleum as well as coal and renewable energy resources to determine compliance to the Philippine National Standard (PNS).

<b>Office or Division:</b>	Geoscientific Research and Fuel Testing Laboratory Division (GRFTLD)			
<b>Classification:</b>	Highly Technical Transaction			
<b>Type of Transaction:</b>	Government-2-Government			
<b>Who May Avail:</b>	EUMB, ERDB, LFO, MFO, OIMB, REMB, VFO			
CHECKLIST OF REQUIREMENTS		WHERE TO SECURE		
1. Sample for Analysis	Office of the GRFTLD Chief SRS			
2. Original (1) copy of Request for Laboratory Services 2 – Internal Form (GRFTL-SF-2)				
CLIENT STEPS	AGENCY ACTIONS	FEES TO BE PAID	PROCESSING TIME	PERSON RESPONSIBLE
1. Submission of samples and Request for Laboratory Services form (GRFTL-SF-2)	1.1 Reviews / checks the correctness of the filled-out request form	None	4 Hours	<i>Technical Staff of the concerned Section of GRFTLD</i>  Note: ☐ Geothermal Coal Section -coal and geothermal water samples ☐ Processed Fuels Section - petroleum and biofuel samples ☐ Geology Section- rock samples ☐ Oil and Gas Section - geothermal gas, biogas or synthesis gas
	1.2 Examines the nature/ size/ weight/ volume of sample if acceptable for the required analysis.			
2. Submission of filled-out Customer Rating –	2.1 Consolidates filled-out forms	None		<i>GRFTLD Staff of the concerned Section</i>

Submission of Sample Form (GRFTL-SF-5a)				
	2.2 Issues of Work Order (GRFTL-SF-3)  a. Dispatches GRFTLSF-3 to the assigned GRFTLD Section		4 Hours	<i>GRFTLD Chief SRS Staff &amp; GRFTLD Chief SRS</i>
	2.3 Analysis of Sample  a. Conducts Sample Preparation / Testing / Analysis ( <i>Refer to page 4 – Conduct of Sample Preparation / Testing / Analysis</i> ) b. Prepares Results of Analysis c. Reviews and Endorses the Transmittal Letter and Test Report to GRFTLD Chief SRS		8 Working Days	<i>GRFTLD Staff (Spvg. SRS, Sr. SRS, SRS II, SRS I, SRA, LT) and GRFTLD Chief SRS</i>
	2.4 Endorses Transmittal Letter and Test Report to ERTLS Director  a. Affixes initial of supervisor of the concerned section and GRFTLD Chief SRS and signature of the ERTLS Director to the Transmittal Letter		1 Working Day	<i>Spvg. SRS, GRFTLD Chief SRS and ERTLS Director</i>
3. Pick up of Test Report and submission of ERTLS – GRFTLD Customer Satisfaction	3.1 Releases Test Report  a. Receives copy of Test Report acknowledged by			<i>ERTLS OD Staff</i>

Measurement Form [Customer Rating – Release of Test Report (GRFTL-SF-5b)]	the customer b. Consolidates filled-out forms.			
<b>Total Number of Days</b>		<b>10 Working Days</b>		

### CONDUCT OF SAMPLE PREPARATION / TESTING / ANALYSIS<sup>a</sup>

<b>Processed Fuels Section</b>	
<b>PNS Test for Automotive Diesel Oil<sup>b</sup></b> (9 samples)	additional 3 days for every 1 - 3 sample/s in excess of 9 samples
<b>PNS Test for B100</b> (6 samples) <sup>b</sup>	additional 3 days for every 1 - 2 sample/s in excess of 6 samples
<b>PNS Test for E100</b> (15 samples) <sup>b</sup>	additional 3 days for every 1 - 5 sample/s in excess of 15 samples
<b>PNS Test for Industrial Fuel Oil</b> (6 samples) <sup>b</sup>	additional 3 days for every 1 - 2 sample/s in excess of 6 samples
<b>PNS Test for Gasoline</b> (6 samples) <sup>b</sup>	additional 3 days for every 1 - 2 sample/s in excess of 6 samples
PNS Test for Kerosene (15 samples)	additional 3 days for every 1 - 5 sample/s in excess of 15 samples
<b>Non-PNS Test for Diesel</b> (20 samples) <sup>b</sup>	additional 4 days for every 1 - 4 sample/s in excess of 20 samples
<b>Non-PNS Test for Gasoline</b> (20 samples) <sup>b</sup>	additional 4 days for every 1 - 4 sample/s in excess of 20 samples
Other Samples e.g. Pyrolysis Oil and Biofuel from other feedstocks (8 samples)	
<b>Geothermal-Coal Section</b>	
Heating Value and Sulfur Analysis with Sample Preparation (8 samples per batch)	additional 2 days for every 1 - 3 sample/s in excess of 8 samples
Proximate Analysis, Ultimate Analysis and Heating Value Determination with Sample Preparation (3 samples per batch)	additional 2 days for every 1 - 2 sample/s in excess of 3 samples
Proximate Analysis with Sample Preparation (3 samples per batch)	additional 2 days for every 1 - 2 sample/s in excess of 3 samples
Ultimate Analysis (CHNAS) with Sample Preparation (4 samples per batch)	additional 2 days for every 1 - 2 sample/s in excess of 4 samples
<i>(For batch analyses without sample preparation, testing may be completed earlier than 10 working days)</i>	
Complete Ion Analysis (5 samples)	additional 5 days for every 1 - 5 sample/s in excess of 5 samples
<b>Oil and Gas Section</b>	
Analysis of Crude Oil (5 samples)	additional 2 days for every 1 sample in excess of 5 samples
Analysis of Natural Gas / Biogas (15 samples)	additional 2 days for every 1 - 4 sample/s in excess of 15 samples
Analysis of Source Rocks / Soil	*Minimum of 10 working days per every one (1) sample. Duration of analysis will depend on the condition of the samples received.
Analysis of Stable Isotope (5 samples)	additional 2 days for every 1 sample in excess of 5 samples
PNS Test for B100: GC Analysis (5 samples)	additional 2 days for every 1 sample in excess of 5 samples
PNS Test for E100: GC Analysis (10 samples)	additional 3 days for every 1 - 2 sample/s in excess of 10 samples
Analysis of Liquefied Petroleum Gas (5 samples)	additional 2 days for every 1 sample in excess of 5 samples
<b>Geology Section</b>	
Micropaleontological / Petrographic / XRD Analysis (3 samples)	additional 3 days for every 1 sample in excess of 3 samples

**Remarks:**

- a. Upon the occurrence of any force majeure event, laboratory shall promptly inform the customer specifying the cause of delay of analysis of samples in accordance with GRFTL Communication Plan.
- b. **ISO 9001:2015 certified processes**