

# Compliance Management in the Energy Sector

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Glenn Matthews | Director: Business Development

Laws &  
Regulations

Internal Business  
Processes

Industry Standards

Joint Venture  
Partner Obligations



Compliance

Governance

Risk

Transparency

Audit & Quality  
Assurance

An offshore oil and gas platform is shown at sunset. The platform is a complex of yellow metal structures, including pipes, ladders, and a crane, situated in the middle of the ocean. The sky is filled with dramatic, dark clouds, and the sun is low on the horizon, creating a golden glow that reflects on the water's surface. The platform's structure is intricate, with various levels and components visible. The overall scene is industrial and atmospheric.

# Hydrocarbon Sector

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Compliance

# Upstream Oil & Gas Project Life-cycle

Exploration

Development

Production

Closure

Activities

Reconnaissance & Planning

Capital Investment -JV Partners

Commence Production

Production ceases

Leasing & Permitting

Off-take agreements

Gas Sales & Marketing

Wells plugged

Land Access

Permitting & regulatory approvals

Production Taxes & Royalties

Facilities Decommissioned

Geological exploration & assessment

Final Feasibility Studies

JV Partner Obligations & Royalties

Waste Management

Proven & Probable Reserves

Site Preparations

Maintenance & support

Site Restoration & Rehabilitation

Regulatory & Corporate Reporting

Design & Construction of Infrastructure

Additional wells

Site Monitoring





# Upstream Oil & Gas Project Life-cycle

Exploration

Development

Production

Closure

Activities

Reconnaissance & Planning	<b>Capital Investment -JV Partners</b>	Commence Production	Production ceases
<b>Leasing &amp; Permitting</b>	<b>Off-take agreements</b>	<b>Gas Sales &amp; Marketing</b>	Wells plugged
<b>Land Access</b>	<b>Permitting &amp; regulatory approvals</b>	<b>Production Taxes &amp; Royalties</b>	Facilities Decommissioned
Geological exploration & assessment	Final Feasibility Studies	<b>JV Partner Obligations &amp; Royalties</b>	Waste Management
Proven & Probable Reserves	Site Preparations	Maintenance & support	<b>Site Restoration &amp; Rehabilitation</b>
<b>Regulatory &amp; Corporate Reporting</b>	Design & Construction of Infrastructure	Additional wells	<b>Site Monitoring</b>





# Case Study: Oil & Gas Sector in Australia

- Landfolio used in the APAC region to manage compliance in the O&G sector for onshore and offshore assets sector since 2016
- Various leading producers have adopted Landfolio to ensure compliance, reduce risk and increase transparency company wide, including business units such as:
  - *Commercial Sales*
  - *Native Title & Cultural Heritage*
  - *Environmental*
  - *Exploration*
  - *Joint Ventures*
  - *Land & Leasing*
  - *Operations*
  - *Well Monitoring*





# Case Study: Oil & Gas Sector in Australia

- Key drivers to implement a compliance management system such as Landfolio include:
  - Ability to manage land tenures, permits, agreements and pipelines across multiple jurisdictions, in a single, centralised system
  - Ability to manage obligations for often complex commercial agreements such as Gas Sale Agreements and Joint Ventures
  - Improved internal reporting via Landfolio dashboards and integration with external BI tools





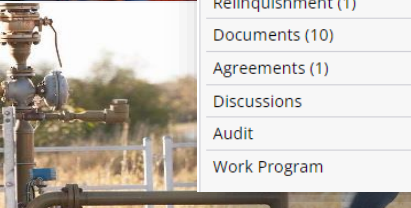
# Case Study: Oil & Gas Sector in Australia

- Key drivers to implement a compliance management system such as Landfolio include:
  - Ability to track and manage work programs and expenditure commitments
  - Ability to manage Project (Groups) level reporting and payments
  - Customisable interface to display fit-for-purpose fields and tabs for the O&G industry





# Case Study: Oil & Gas Sector in Australia



## General

### Additional Information

Other Details (1)

Parties (6)

Groups (8)

Related Licenses (6)

History (1)

Conditions (1)

Commodities (1)

User Roles (4)

Actions Open (8)

Actions Closed (4)

Shape (1)

Map References (36)

Relinquishment (1)

Documents (10)

Agreements (1)

Discussions

Audit

Work Program

## Additional information

Regulator	DOR (QLD)
Legislation	2004 Petroleum and Gas (Production and Safety) Act (QLD)
Basin	Surat
Sub Basin	
Field	Moonie
Production Status	Non-Producing
Prior Usage	No

## General

### Additional Information (1)

### Other Details

Parties (6)

There are **1** Other Details in the list.

**1**

All	Other Detail Type	Other Detail
<input type="checkbox"/>	Native Title Status	Determination - Native Title does not exist



# Case Study: Oil & Gas Sector in Australia



- General
- Additional Information (1)
- Other Details (1)
- Parties (6)
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- Audit
- Work Program

Report Title:   NULL

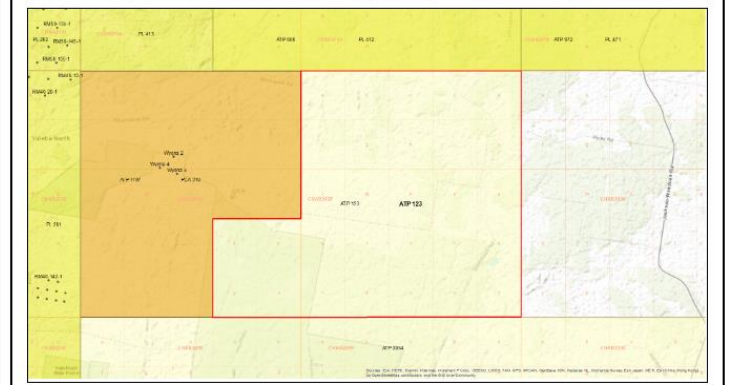
1 of 1 Find | Next

## Work Program Commitments

ATP 123		Roma		Surat	
Tenure Granted:	23-Mar-20	Work Program Start Date:	23-Mar-20		
Tenure Renewed:		Work Program End Date:	22-Mar-24		
Tenure Expiry:	22-Mar-26				Official Area: 29 Sub Blocks

Joint Venture	Participants	Operator	Registered Title Holder Interest	JV Participant Interest
ATP 1187	Mining Ventures Pty Ltd	Yes	30	
	Dimension Exploration Pty Ltd		27.5	27.5
	Mining Australia		20	20
	Prospect Pty Ltd		15	15
	Mining Australia II		7.5	7.5
	Mining Ventures Pty Ltd			
Total %			100	100



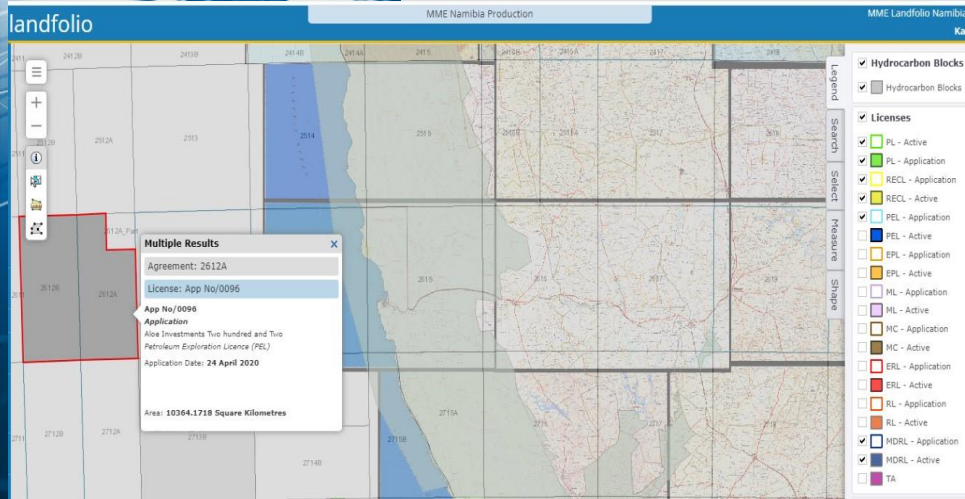
WORK PROGRAM					
Year	Start	End	Activities	Est. Expenditure \$	
Year 1	23-Mar-20	22-Mar-21	Geological, Geophysical and Engineering studies Survey - 2D seismic reprocessing - 30 Line km (three lines)	166,000	
Year 2	23-Mar-21	22-Mar-22	Survey - 2D seismic survey acquisition - 50 Line km (five lines)	1,000,000	



# Case Study: Petroleum Cadastre - Namibia

*The Namibian Ministry of Mines & Energy expanded their existing Landfolio system in 2018 to include the Directorate of Petroleum Affairs. Petroleum Affairs required the system to manage all aspects of their petroleum cadastre including:*

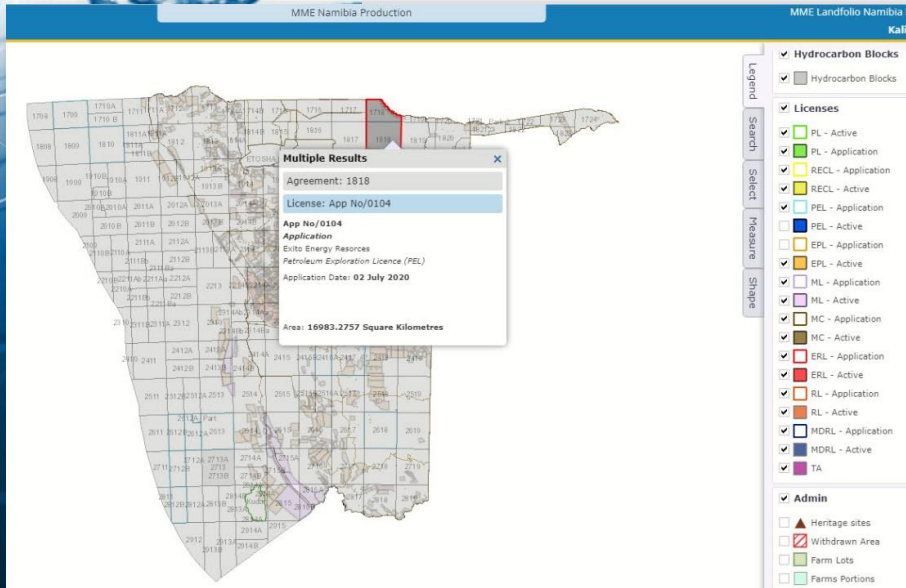
- Upstream & downstream license processes
- Key attribute information & data
- Reporting for the Directorate



# Case Study: Petroleum Cadastre - Namibia

Enhanced compliance management was required by the Petroleum Directorate to help reduce risk & improve transparency – particularly with data

- Data previously managed manually in Excel
- Data inconsistencies
- No audit trail
- Limited transparency
- Limited collaboration





# Case Study: Petroleum Cadastre - PASA

geoportal.petroleumagencysa.com/PortalPASA/MapPage.aspx?PageID=bb62d012-a246-470e-956c-07c3797c01e0

## Oil and Gas Application Portal

- Application Portal
- Home
- Sign In
- Registration
- Map Portal**
- Guiding Documents
- Application Forms
- Guidelines
- External Links
- PASA Website
- WinDeed
- DEFF: Protected Areas
- Legal
- Contacts
- Terms of Use
- Privacy Policy

Legend

- Permits & Rights
  - Applications
  - Admin & Cadastral
- Administrative Data
  - Magisterial District
  - Farm Portions
  - Farm Boundaries
  - National Parks
- Lease
  - Onshore Lease
    - TCP
    - ER
    - PR
  - Offshore Lease
    - TCP
    - ER
    - PR
- Reconnaissance Permit (RP)
- Shallow Open Acreage

-4519145 m 1792462 m

In 2018, the *Petroleum Agency South Africa*, contracted Esri South Africa and partner Trimble, to implement an Application Portal for Permits and Rights Applications, and Environmental Authorisations.

<https://geoportal.petroleumagencysa.com/PortalPASA>



# Case Study: Petroleum Cadastre - PASA

**Oil and Gas Application Portal**

Portal User (Test Company Ltd) ▼

### Application Instructions

To successfully submit your application, you will follow these steps:

#### Prepare your application

1. Download, scan and fill in the relevant application form
2. Select application type
3. Enter or upload the coordinates for the area for which you are applying
4. Choose commodities
5. Upload the required documents

#### Validate your application

1. Click the Continue button to validate that all required documents have been attached and that your requested area is acceptable.
2. If there are problems with the requested area, you will need to modify the coordinates before continuing.
3. The final, acceptable coordinates will be displayed for your confirmation before the application is created.

#### Pay application fee

1. Once the application is created, you will be taken to the payment screen, where you can choose your method of payment.
2. Cancelling your payment does not cancel the application itself. You can return later to submit your payment.
3. **Your application fee applies to this submission only and is non-refundable.**

*Your application is not considered complete, and the requested area is not reserved, until the application fee is successfully paid.*

### Application Details

Applicant: \_\_\_\_\_

Type: ▼

- Exploration Right (ER)
- Exploration Right: Renewal (ER (R))
- Production Right (PR)**
- Production Right: Renewal (PR (R))
- Reconnaissance Permit (RP)
- Technical Cooperation Permit (TCP)

[Save and Exit Discard](#)  
Saved Today 1:32 PM

## New Applications

- Exploration Right (ER)
- Production Right (PR)
- Reconnaissance Permit (RP)
- Technical Cooperation Permit (TCP)

## Renewals

- Exploration Right
- Production Right

## Environmental Authorisations

- NEMA S&EIR applications
- NEMA BAR applications
- NEMWA S&EIR applications
- NEMWA BAR applications



# Renewables Sector

Compliance



# What is Renewable Energy?



Energy that is generated using renewable resources that are naturally replenished on a human timescale, including carbon-neutral resources like wind, sunshine, water and geothermal heat.

25% of global electricity is generated from renewable sources. 80% of new capacity comes from renewable resources.

11% of total global energy consumption (electricity + transportation + heating) comes from renewable sources.



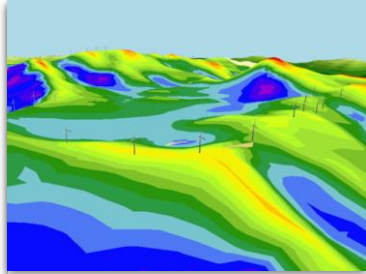


# Wind Farm Lifecycle



## 1. Feasibility & Planning

- Site assessment
- Land use & zoning
- Environmental
- Proximity to the grid
- Coordinate land owners
- High level wind modelling
- Construction estimates
- Financial model
- Uncover fatal flaws
- Site selection



## 2. Design

- Assemble detailed design
- Accurate wind modeling from site measurements
- Select wind turbines
- Refine turbine locations
- Access roadways
- Transmission lines
- Detailed earthworks
- Permitting
- Legal / financial
- Environmental



## 3. Construction

- Access roadways
- Underground cabling
- Turbine foundations
- Assemble & install turbines
- Connect to grid
- Commission



## 4. Operation / Maintenance

- Physical inspection
- Service mechanical parts
- Clean & paint
- Repair turbine blades
- Check foundations
- Road maintenance
- Land Owner Compensation Payments



## 5. Decommission

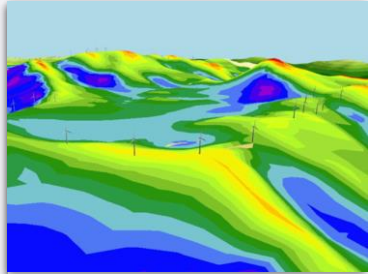
- Remove and dispose of above-ground assets
- Leave buried assets
- Occasionally a wind farm is “repowered”, but it is essentially a new project
- Site Rehabilitation
- Site Monitoring



# Wind Farm Lifecycle



1. Feasibility & Planning



2. Design



3. Construction



4. Operation / Maintenance



5. Decommission

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# Case Study: Global Green Energy Project

Trimble has recently been contracted to implement a global Land Management Solution for a leading green energy company with advanced projects across the globe.

- Trimble was selected as the optimal solution provider:
  - Ability to manage compliance across multiple jurisdictions
  - Ability to manage different land, lease and approval types with a customisable interface
  - Cloud friendly solution
  - Ability to integrate seamlessly with the company's Esri ArcGIS environment and other corporate systems
  - Trimble's global domain knowledge



# Case Study: Global Green Energy Project

The screenshot displays the Trimble landfolio software interface for a Renewable Energy project. The main map shows an aerial view of the Tahoka Wind Farm, with various land parcels outlined in white and colored overlays representing different land rights and permits. A popup window titled "Multiple Results" is open, displaying the following information:

- Onshore Wind: Tahoka Wind Farm
- Asset: 02170-00001-00500-010000
- Instrument: WL-TAH-20

The popup also shows details for the selected instrument:

- WL-TAH-20**
- Bcb Land & Energy Llc Lease**
- Wind Lease
- Operational
- BCB LAND & ENERGY LLC (100%)
- Date End: 09/May/2024

The interface includes a navigation menu on the left with options such as Home, Assets, Instruments, and Maps. The right side features a legend and filter panels for Land Rights, Permits, Ground Disturbance, and Assets & Instruments. The top right corner shows the user's name as Glenn Mat and the project name as FFI Renewables Demo.



# Case Study: Global Green Energy Project

## WL-TAH-160

Code: WL-TAH-160

Name: Martha H Martin Lease

Parties: Clearway (100%); MARTHA H MARTIN (100%)

Type: Wind Lease

Sub Type: Operational

Status: Operational

Signed Date: 19/Jan/2021

- General
  - Parties (2)
  - Conditions (2)
  - Shape (1)
  - Map References (2)
  - Documents (1)
  - Other Details (1)
  - Infrastructure**
  - Wind Royalty (5)
  - Assets (2)
  - Groups (2)
  - Related Instruments (1)
- Actions Open (21) | Actions Closed (6) | User Roles (1) | Discussions | Audit | Report Details

### Equipment

There are **3** items in the list.

Type	Number	Install Start	Install End	Comments
Wind Turbine	5.00	28/Aug/2021	28/Aug/2022	
Inverters	5.00	28/Aug/2021	28/Aug/2022	
Controller	2.00	28/Aug/2021	28/Aug/2022	



# Case Study: Global Green Energy Project

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Parties: Clearway (100%); MARTHA H MARTIN (100%)

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Status: Operational

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General	Parties (2)	Conditions (2)	Shape (1)	Map References (2)	Documents (1)	Other Details (1)	Infrastructure (3)	<b>Wind Royalty</b>	Assets (2)	Groups (2)	Related Instruments (1)
Actions Open (21)	Actions Closed (6)	User Roles (1)	Discussions	Audit	Report Details						

### Gross Earnings Royalty

There are 5 items in the list.

Month	Production From Turbines (Kwh)	Percent of Total Prod	Production Tot Revenue	Royalty Rate	Royalty Earned	REC Revenue	REC Rate	REC Payment	Total Payment
Jan	14,045,020.03 MW	29.27 %	91,581.68 US Dollar	4.50 %	8,666.01 US Dollar	0.00 US Dollar	4.50 %	0.00 US Dollar	8,666.01 US Dollar
Feb	13,426,901.74 MW	29.39 %	34,601.38 US Dollar	4.50 %	1,563.37 US Dollar	0.00 US Dollar	4.50 %	0.00 US Dollar	1,563.37 US Dollar
Mar	17,476,666.04 MW	29.24 %	134,799.95 US Dollar	4.50 %	6,092.88 US Dollar	161,689.25 US Dollar	4.50 %	2,136.92 US Dollar	8,229.80 US Dollar
Apr	15,238,438.41 MW	28.53 %	132,032.21 US Dollar	4.50 %	5,970.89 US Dollar	0.00 US Dollar	4.50 %	0.00 US Dollar	5,970.89 US Dollar
May	20,270,901.92 MW	28.50 %	397,431.94 US Dollar	4.50 %	17,984.35 US Dollar	0.00 US Dollar	4.50 %	0.00 US Dollar	17,984.35 US Dollar

### Proportionate Production



# Summary

- Many similarities between land/permit compliance management for Minerals sector and the Energy Sector
- Landfolio may be implemented to manage compliance across various stages in the project life-cycle
- Landfolio may be configured and customised to cater for the energy sector's requirements for both Government's and commercial clients



A landscape photograph featuring several wind turbines in the distance, set against a bright sky with scattered clouds. The foreground is a lush green field with some brush. A large blue rectangular box is overlaid on the left side of the image, containing white text.

**Thank you.  
Questions?**

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[landadmin.trimble.com](http://landadmin.trimble.com)

*Transforming the way land tenure is  
secured and land assets are managed.*