Research as a Service

Pilot Energy

Q4 CY21 Update

Heading into a big 2022

Pilot Energy Ltd (ASX:PGY) is a junior oil and gas exploration company that is transitioning to face the new industry paradigm – renewable energy. The company is progressing feasibility studies over its renewable and carbon-capture options, the Mid-West and South-West projects, which may enter a demonstration phase from end-2022. Pilot is pursuing an integrated wind and solar power generation opportunity with hydrogen manufacture by leveraging its oil production infrastructure and tenements, with multiple commercial outcomes. The company has existing oil production and a Tcf-scale gas play coincident with its South-West Project. Although the renewables plays are early stage, the value proposition is beginning to materialise and initial feasibility results confirm the commercial opportunity. There is a portfolio of potential, likely worth more than the sum of the parts especially leveraging its acreage and infrastructure assets. The remainder of 2022, in particular, could deliver material re-rating outcomes in the success case.

Business model

Pilot Energy is a junior oil and gas company with a portfolio of emerging opportunities. The critical focus of management will be its transformational growth opportunities in the renewables and carbon-capture space through its Mid-West and South-West project proposals, which are progressing through a feasibility phase. The company is looking to leverage its acreage and infrastructure base to underpin a strategic blueprint for expansion into renewable energy and carbon capture; and the diversified revenue streams that could emerge. Financing for the renewables and other downstream opportunities could be provided partly through partnering, which may be deliverable around end-2022.

Conceptual to actual – feasibility results are supportive

The timeline is crystallising with feasibility studies set to be completed by the end of Q1 CY2022 and the development strategy potentially moving into a demonstration (pilot) phase in early 2023 for the Mid-West Wind and Solar Project. Feasibility studies on the South-West Project are likely to be completed through mid-CY22 to be followed by the drilling of the Tcf-scale Leschenault gas prospect. Early indications from the studies confirm the technical potential of the renewable power generation and CCS, whilst work continues on the hydrogen-generation opportunities. The carbon-capture market is significantly greater than initially considered. We see potential for a material de-risking across the portfolio on the delivery of positive conclusions to studies by the end of CY22. Success cases should also provide the platform for financing and partnering.

The risk is slowly unwinding

Valuing early-phase projects and project proposals remains a subjective exercise, particularly when timing of work programmes and financing are somewhat uncertain. The market is now pricing renewables options and we have assigned carrying values to reflect these opportunities and risks within the PGY portfolio. We retain a risked valuation of $130mn (**26cps**) to the portfolio against a reference share price of 4.5cps**.** We note the renewables and carbon-capture options are as yet still early stage and subject to significant change through the feasibility and evaluation process. The move to pilot/demonstration operations should provide a tangible NAV-based valuation platform. Our current value should be considered within that context and with the commensurate risk overlay. It's worth highlighting that a successful, integrated renewables development **could deliver an equity value of >$2.3bn** across the life cycle, on a 1.5GW project with associated hydrogen manufacture on the basis of our assumptions and reference valuation methodology.

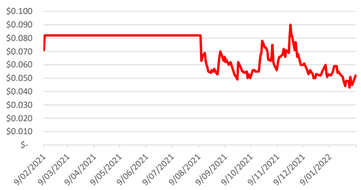
Renewable Energy

9th February 2022

Share Details

ASX code	PGY
Share price (8-Feb)	$0.049
Market capitalisation	$24.7M
Shares on issue	504.4M
Net cash at 31-Dec-2021	$5M
Free float	~51.4%

Share Performance (12 months)



Upside Case

- Materially de-risking the commercial cases for the Mid-West and South-West renewable and CCS projects through finalisation of the feasibility studies and securing suitable partners whilst further defining the greater renewable power opportunities (hydrogen and commercial CO_2)
- Further recovery in commodity (oil) prices
- Resolution of offtake issues at Cliff Head maintaining production life and cashflow

Downside Case

- No material progress on renewable energy development options over the next 12 months and competing projects push ahead
- Commodity (oil) prices retracing historical lows
- Cliff Head underperforms or shuts, generating the risk of earlier-than-expected abandonment

Board of Directors

Brad Lingo	Executive Chairman
Tony Strasser	Managing Director/CEO
Bruce Gordon	Non-Executive Director
Daniel Chen	Non-Executive Director

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Feasibility Under Way And Motoring Ahead

The renewable and carbon capture feasibility studies well underway. Initial results confirm the technical potential of the renewable power generation and CCS. Work continues on hydrogen generation options.

Exhibit 1: December quarter highlights and comments

Production and revenue		4Q'21	
Cliff Head continued to produce and sell crude oil through the quarter	Production (net barrels) Sales (net barrels) **Oil price received (A$/b)**	13,190 25,064 **$106**	Daily gross production for the quarter was 675bpd
BP Kwinana will cease its storage agreement with the CHJV on 22-April. Alternate market options are required.	Sales revenue (A$'000) Operating margin Gross profit	$2.654 $1,510 $1,102	Operating costs inc. inventory movement of ($597) Trucking. Handling and non-routine costs of ($408)

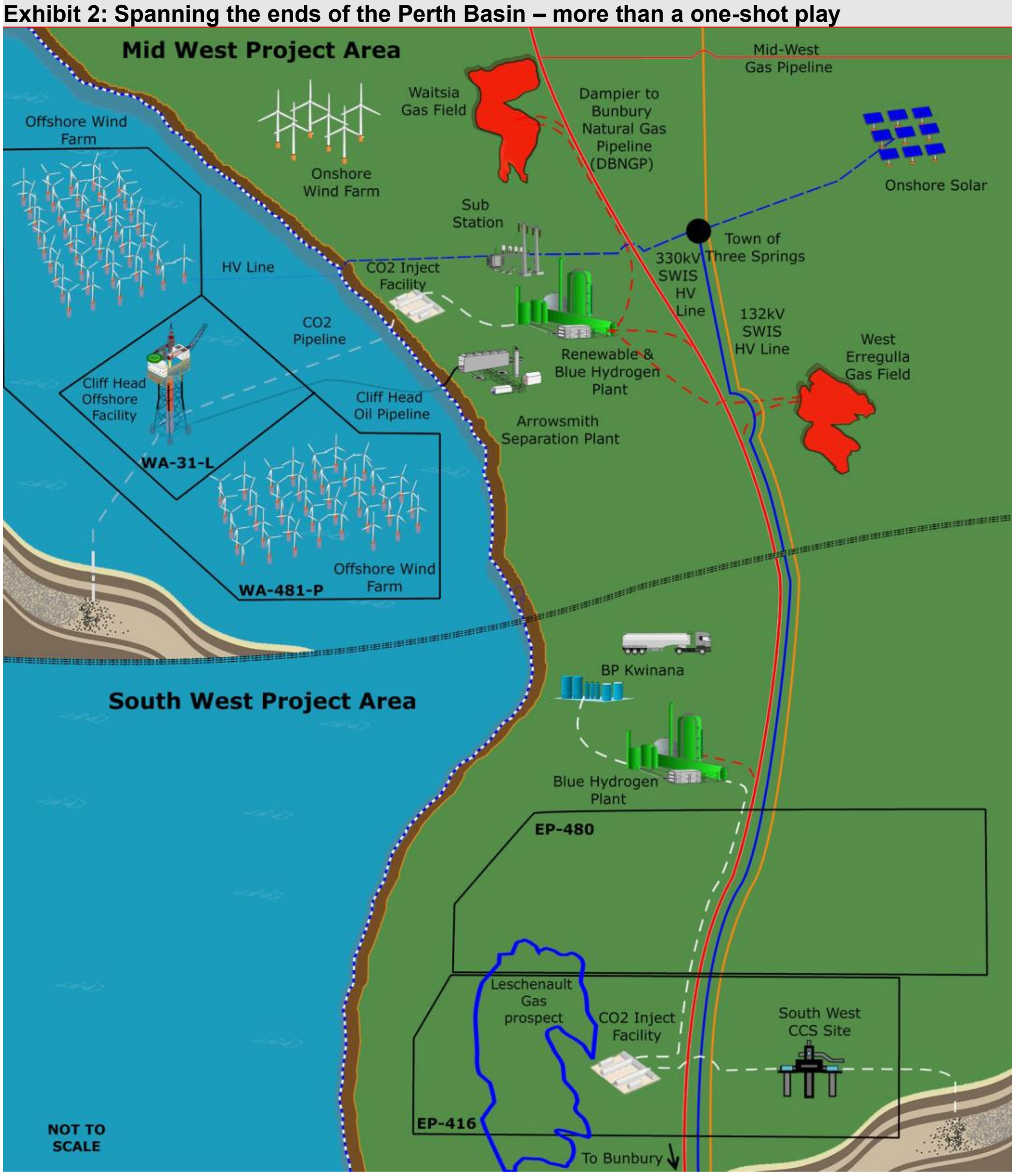
Exploration – there are remaining permit commitments to be serviced	
WA-481-P Cliff Head area - offshore	Planning has been completed for the acquistion of 3D/2D seismic. As part of the Year 1-3 commitment expenditure, some 350km² (3D) and 200km (2D) must be acquired. Acquisition is expected to commence in 2023 with PGY looking to leverage the surveys to complement future renewable requirements.
EP 416 and EP 480 Southern Perth Basin - onshore	PGY formalised a binding farmin agreement with Advanced Energy Transition Pty Ltd (AET) to *"…fully fund the drilling of one well"* to earn a 50% interest in the Leschenault prospect in the event of a gas discovery or 20% of any future CCS opportunity. AET is progressing the well engineering studies – PGY is progressing regulatory approvals. Concomitantly, PGY is reprocessing legacy seismic including an AI inversion (of a data subset) to reduce the structural and geological risks of the prospect. A geochemical survey across the structure has entered the planning stage. These works represent part commitments of Year 1 (EP 416) and Year 3 (EP 480) licence conditions.
Hydrogen and renewables feasibility studies (refer **Exh 2**)	
Key contractors have been appointed, work streams commenced and a consortium formed.	During the quarter PGY formed a consortium including APA Group (APA.ASX) and Warrego Energy (WGO.ASX) to jointly undertake and dfund the Mid West **Blue Hydrogen** and CCS Feasibility Study. The consortium provides expertise across the required areas of the project, infrastructure, gas supply and carbon management, focussing on technolgy, regional CCS potential, hydrogen markets, infrastructure and commercial considerations.
Mid West Hydrogen and Renewables	Draft reports for the 'Wind and Solar' compenents of the project were received during the quarter specifically addressing the renewable energy reosurces, electrical transmission requirements and **green hydrogen** potential. As noted *'…(t)he early result sof the study continue to support pre-study expectations'* that the renewable resource is *'…sufficient to support large scale onshore and offshore projects'*. The 'Blue Hydrogen' study has established that the Cliff Head area *'…can support 550kt pa of CO_2 injection and ~6.5Mt pa of CO_2 storage'* pending further analysis. The most recent reference price for ACCUs as reported by Reputex Energy is ~A$57/tonne, an increase of >200% over 2021 with further upside pricing being noted through January (+8%). The equation is simply…at 550kt pa of CO_2 injected, a successful CCS development project utilsing the existing oil production infrastructure (WA-481-P/Cliff Head), would potentially generate a A$31mn pa 'annuity' stream. A key study conducted by 8 Rivers Capital LLC, assessed two alternate configuration for hydrogen production including an option to integrate a **green hydrogen** option, via water-based electolysis to generate pure oxygen. The oxygen could then be supplied to the **blue hydrogen** facility. The basis of the study assumes two cases – 42kt pa and 84ktpa of **blue hydrogen.** *Our understanding from current research papers is that the economics of **green hydrogen** production remains subjective at this time, requiring a quantum change in catalyst costs and efficiency rates [RaaS commentary] while **blue hydrogen** (with CCS) is only marginally more expensive than conventional **grey hydrogen** (without CCS) which currently accounts for 98% of global hydrogen production of 75Mt pa.(source IEA).*
South West Carbon Management	Feasibility studies commenced with an initial assessment of the SW region's "flue gas" emmissions (that emited from a pipe, channel or chimney). **Some 18Mt pa of CO_2 equivalent emmissions [CO_2e] have been identified**. We note previous studies conducted by the Department of Mines, Industry Regulation and Safety (DMIRS) had set a base case CCS option of 24Mt CO_2 at a rate of up to 800kt pa over 30 years.
Corporate	
Termination of WA-481-P deal (refer **Exh 2** and commentary)	As a result of a NOPTA ruling, PGY has served notice to Triangle Energy (TEG.ASX) of its intention to terminate a proposed sale of a 78.75% interest and operatorship of WA-481-P. PGY now assumes 100% of the remaining three-year capital programme, estimated at up to $1.22mn and the on going costs of the feasibility study. *The WA-481-P permit wraps around the Cliff Head production licence with the deal intended to align interests in the offshore Perth Basin upstream and Offshore Wind and Solar Project given the commonality of assets and logical operating efficiencies [RaaS commentary].* PGY has noted that technical feasibility studies indicates that WA-481-P has over 10-times the carbon capture potential identified within the Cliff Head production license…*the economics of continuing oil production are marginal.*
Capital expenditure	…for the period totalled ~$0.63mn (ex-Cliff Head requirements) on other exploration and feasibility studies.
Cash balance remains healthy	The cash balance as at 31-DecJun was $5.0mn.

Source: Company data; *[RaaS commentary where noted]*

The Plan Is Coming Together

The company continues to advance its detailed feasibility studies on the development of an integrated offshore wind/onshore wind and solar project (Mid-West Project), with the generation of renewable electricity and hydrogen.

Exhibit 2: Spanning the ends of the Perth Basin – more than a one-shot play



Source: Company data (not to scale)

As has been previously been outlined by the company and released in numerous presentations, the broad elements of the **Mid-West Project** opportunity encompass:

- A material exposure to the world-class wind and solar energy resources, with the coastal mid-west;
- Infrastructure leverage provided by an extensive integrated power grid (330kV transmission lines), access gas pipelines and established port, rail and road systems; and
- The capacity to leverage existing offshore oil and gas infrastructure and production.

…to provide and underpin a **clear hydrogen development pathway.**

We have previously suggested the PGY hydrogen proposal to utilise natural gas for **blue** hydrogen (as a precursor to **green**) provides multiple ways to market and multiple revenue streams, providing a tangible pathway to hydrogen commercialisation at scale.

The economic analysis is expected to continue producing a bankable feasibility report by around end-2022.

Concomitantly, PGY will be aiming to secure validation partnerships to move into and through the FEED stage of financing and project sanction, which are likely to be completed through 2023.

We note the company's announcement of a consortium with APA Group and Warrego Energy to *'...jointly undertake and fund'* the **blue** hydrogen and CCS studies. The group will aim to integrate and leverage off each company's expertise in infrastructure, carbon management and gas supply.

A fly in the ointment?

Pilot has given notice of its intention to terminate a proposed farm-out deal with Triangle Energy pertaining to WA-481-P with NOPTA indicating it was unlikely to approve the transfer on financial grounds.

The alignment of interests across the Cliff Head production licence (WA-31-L) and WA-481-P made sense given the commonality of assets and potential operating efficiencies. Additionally, the smoothing of working interests would, in our view, have made next-phase developments simpler, without the need for separate access, processing or unitisation agreements.

Under the farm-out terms, PGY would have transferred a 78.75% interest in WA-481-P (oil and gas interest) and a 20% interest in the Mid-West Wind and Solar Project. With the termination of the agreement, the company will now retain 100% interests and operatorship of both projects.

Given the financial carries agreed under the farm-out proposal no longer apply, PGY will need to assume its share of capital commitments related to WA-481-P, which at the time of the deal were estimated to be ~$1.2mn over three years.

In terminating the WA-481-P farmout, PGY has noted that technical feasibility studies have estimated that the area of WA-481-P surrounding the Cliff Head oil field has over 10 times the carbon-capture potential identified within the Cliff Head production licence. Pilot has also indicated that given the potential that the preliminary feasibility study results are providing it sees greater value to progressing the Mid West Renewable Energy and Mid West Hydrogen and Carbon Capture projects independent from involvement with Triangle Energy, noting that several parties have expressed interest in partnering with Pilot in both the stand-alone wind and solar renewable energy projects and the clean hydrogen and carbon-capture projects.

Exhibit 3: Financial Summary

PILOT ENERGY		PGY	
YEAR END		SEP	
NAV	A$	$0.26	
SHARE PRICE	A$	$0.05	cot 7-Feb
MARKET CAP	A$M	25	
ORDINARY SHARES	M	504	
OPTIONS	M	88	Unlisted exerciseable at $0.033-0.066

nm = not meaningful
na = not applicable

COMMODITY ASSUMPTIONS		FY20A	FY21A	FY22E	FY23E
Brent Oil Price	US$/b	40.68	42.16	54.69	73.26
Exchange rate		0.7226	0.7170	0.7298	0.7277
Hedged Oil Price	A$/b				
Realised Gas Price	A$/gj				
Realised Oil Price	A$/b	56.30	58.79	74.94	100.67
RATIO ANALYSIS		**FY20A**	**FY21A**	**FY22E**	**FY23E**
Shares Outstanding	M	106	502	504	504
EPS (pre sig items)	Acps	(0.8)	(0.6)	(0.2)	(0.2)
EPS (post sig items)	Acps	(0.8)	(0.6)	(0.2)	(0.2)
PER (pre sig items)	x	na	nm	nm	nm
OCFPS	Acps	na	(0.6)	(0.2)	(0.1)
CFR	x	nm	na	na	na
DPS	Acps				
Dividend Yield	%				
BVPS	Acps	0.2	2.4	2.4	2.2
Price/Book	x	30.0x	2.1x	2.1x	2.3x
ROE	%	79%	na	na	na
ROA	%	na	na	na	na
(Trailing) Debt/Cash	x				
Interest Cover	x				
Gross Profit/share	Acps	na	na	na	na
EBITDAX	A$M	356	313	863	1,238
EBITDAX Ratio	%				

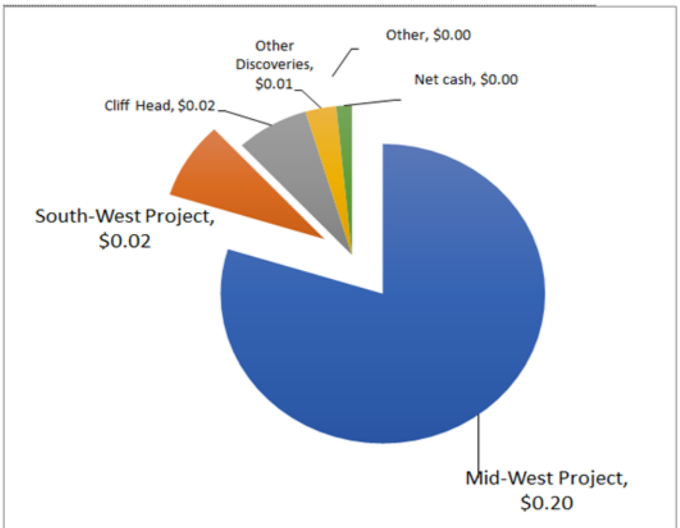
EARNINGS	A$000s	FY20A	FY21A	FY22E	FY23E
Revenue					
Cost of sales		(569)	(3,256)	(1,971)	(1,943)
Gross Profit		**(569)**	**(3,256)**	**(1,971)**	**(1,943)**
Other revenue		356	313	863	1,238
Other income					
Exploration written off		(669)	0	(50)	(50)
Finance costs					
Impairment					
Other expenses		(0)	0	(25)	(100)
EBIT		(882)	(2,943)	(1,183)	(855)
Profit before tax		**(889)**	**(2,943)**	**(1,156)**	**(838)**
Taxes		0			
NPAT Reported		**(889)**	**(2,943)**	**(1,156)**	**(838)**
Underlying Adjustments					
NPAT Underlying		**(889)**	**(2,943)**	**(1,156)**	**(838)**

CASHFLOW	A$000s	FY20A	FY21A	FY22E	FY23E
Operational Cash Flow		**114**	**(3,184)**	**(1,088)**	**(685)**
Net Interest		0	(5)	27	17
Taxes Paid					
Other					
Net Operating Cashflow		**114**	**(3,189)**	**(1,061)**	**(668)**
Exploration/Development		(338)	(915)	(250)	(500)
Capex			0	(215)	(215)
Investments					
Net Asset Sales/other					
Net Investing Cashflow		**(338)**	**(915)**	**(465)**	**(715)**
Dividends Paid					
Net Debt Drawdown		0			
Equity Issues/(Buyback)		100	10,295		
Other					
Net Financing Cashflow		**143**	**9,611**	**0**	**0**
Net Change in Cash		**(81)**	**5,448**	**(2,076)**	**(2,133)**
BALANCE SHEET	**A$000s**	**FY20A**	**FY21A**	**FY22E**	**FY23E**
Cash & Equivalents		7	5,455	3,379	1,246
PP&E & Dev-Expl		75	3	2,050	3,082
Investments		0	212	4,650	4,650
Total Assets		**159**	**11,993**	**12,073**	**10,895**
Debt					
Total Liabilities		**1,280**	**920**	**390**	**250**
Total Net Assets/Equity		**(1,121)**	**11,072**	**11,683**	**10,645**
Net Cash/(Debt)		7	5,455	3,379	1,246

PRODUCTION			FY20A	FY21A	FY22E	FY23E
Cliff Head	Oil	kb		66	62	63
TOTAL		**kb**		**66**	**62**	**63**
Sales Volumes						
Product Revenue		A$mn				
Ave Price Realised		A$/boe				
Cash Costs		A$/boe				
Cash Margin						

RESERVES & RESOURCES				as of 30/06/2021	
Reserves			**Oil**		
	Mb	2P	1C	2C	3C
Cliff Head		0.3			
SE Nose			0.1	0.2	0.3
West High				0.2	0.4
Other Prospects				0.4	
TOTAL		0.3	0.1	0.8	0.7
Prospective Resources					
	Mb		Low	Best	High
Mentelle Updip				1.2	
Other				0.8	
TOTAL				1.9	

EQUITY VALUATION	Interest	Pr	A$M	Acps	
Renewables and Carbon Capture					
Mid-West Project	80%	75%	$101	$0.20	
South-West Project	50%	5%	$11	$0.02	
O&G Upstream					
Cliff Head	21%	100%	$6	$0.01	
Cliff Head Contingent	21%	25%	$4	$0.01	
Other Discoveries			$4	$0.01	
Exploration			$4	$0.00	
			$129	**$0.26**	
Net Cash/(debt)			$5	$0.01	
Corporate costs			-$3	-$0.01	
					P/NAV
TOTAL			**$131**	**$0.26**	0.19
Cash Producing Assets				**$0.01**	



Source: RaaS Advisory

FINANCIAL SERVICES GUIDE

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