

Bridging ESG Data Gaps: A Global Initiative Integrating the LEI into the Global Energy Ownership Tracker

4 October 2025





Enabling global identity
Protecting digital trust



Agenda

1. **Who is Global Energy Monitor?**
2. **What is the Global Energy Ownership Tracker?**
3. **Who is GLEIF and what is the LEI?**
4. **Integrating LEIs with the Ownership Tracker**
5. **Opportunities from Data Interoperability**

Background on GEM

GEM began in 2007 as a project to support the anti-coal movement in the US by developing freely shared data on a custom wiki platform. The organization now has ~90 staff in 13 countries.



GEM has a large library of energy, heavy, and extractive industry trackers

GEM developed its “tracker” methodology for coal plants. It now has over 25 trackers covering coal, gas, oil, renewables, heavy industry, finance, and ownership.



Global Integrated Power Tracker



Global Energy Transition Tracker



Global Coal Plant Tracker



Global Coal Mine Tracker



Global Oil Infrastructure Tracker



Global Oil and Gas Extraction Tracker



Global Coal Project Finance Tracker



Global Coal Terminals Tracker



Global Oil and Gas Plant Tracker



Global Gas Infrastructure Tracker



Global Methane Emitters Tracker



Global Solar Power Tracker



Global Bioenergy Power Tracker



Global Geothermal Power Tracker



Global Hydropower Tracker



Global Wind Power Tracker



Global Nuclear Power Tracker



Global Steel Plant Tracker



Global Blast Furnace Tracker



Africa Energy Tracker



Global Energy Ownership Tracker



Private Equity Tracker



Portal Energético para América Latina



Asia Gas Tracker



Europe Gas Tracker

The Global Energy Ownership Tracker covers ownership research for several asset classes

Long term aspiration is to cover ownership for all other trackers



Global Energy Ownership Tracker



Global Oil
Infrastructure Tracker



Global Coal Mine
Tracker



Global Gas
Infrastructure Tracker



Global Cement and
Concrete Tracker



Global Iron Ore Mine
Tracker



Global Iron and Steel
Plant Tracker



Global Integrated
Power Tracker



Global Bioenergy
Power Tracker



Global Coal Plant
Tracker

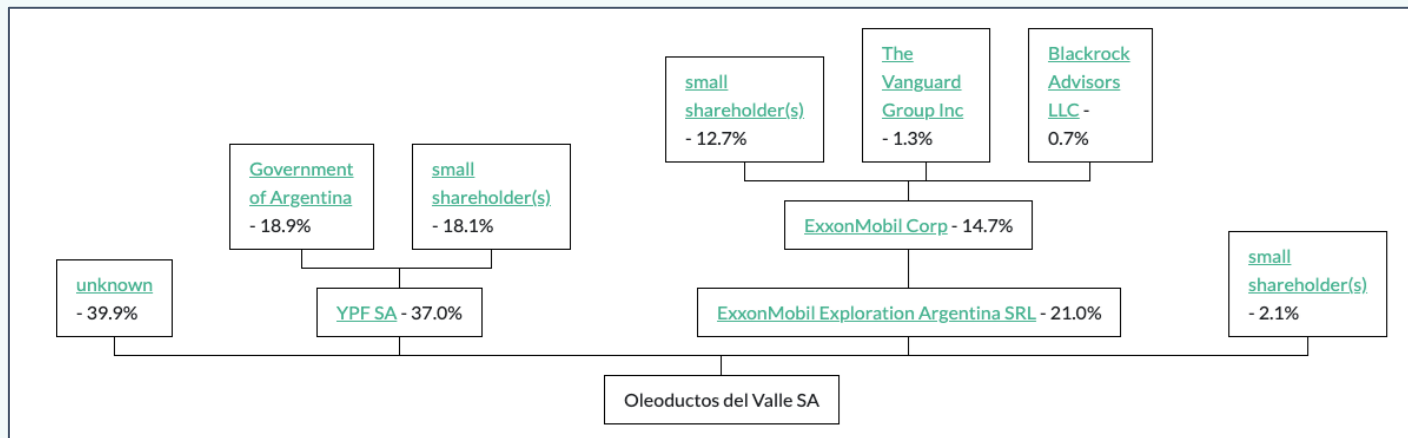


Global Oil and Gas
Plant Tracker

We map each level of the chain from the direct owner up to the highest-level ultimate parents



Oldestal Oil Pipeline (Argentina)



GEM publishes a network format of entities...

A unique GEM Entity ID is assigned to each entity in our network.

GEM Entity ID	Full Name	Name Local	Name Other	Abbreviation	Entity Type	Publicly Listed	Home Page	Registration Country	Registration Subdivision	Headquarters Country	Headquarters Subdivision	Global Legal Entity Identifier Index
E100001014315	1832 Asset Management LP				legal entity	FALSE		Canada		Canada	Ontario	5493000GV3I153MMF497
E100001016594	1947 Trust				legal entity			Singapore		Singapore		
E100000120000	24 Hour Mining and Industry Co Ltd		24 Hour Mining & Ind		legal entity	FALSE		Myanmar		Myanmar		not found
E100001010786	24R Advisory Services Pvt Ltd				legal entity	FALSE		India		India		not found
E100000000393	27 municipal utilities and regional energy suppliers				legal entity			Germany				not found
E100002002888	3A Capital Services Ltd				legal entity			India		India		
E100001013982	3Bear Energy LLC				legal entity	FALSE		United States	Delaware	United States	Colorado	not found
E100001010780	3B Power Sdn Bhd				legal entity	FALSE		Malaysia		Malaysia		not found
E100000002360	3-Energoortalyk JSC	АО 3-Энергоорталык			legal entity	FALSE	https://www.energoortalyk.kz	Kazakhstan		Kazakhstan		not found
E100000120001	3S Enerji ve Maden Üretim				legal entity							
E100001001188	4C Acquisition LLC				legal entity	FALSE		United States		United States		not found
E100000131204	4th Gen Fuels LLC				legal entity	FALSE		United States		United States	Kentucky	not found
E100000002168	8 Rivers Capital LLC				legal entity	FALSE	https://8rivers.com	United States	Delaware	United States	North Carolina	not found
E100002003905	9404-5515 Québec Inc				legal entity	FALSE		Canada	Quebec	Canada	Quebec	not found
E100000131205	99 Thuwanon Co Ltd				legal entity	FALSE		Thailand		Thailand	Krung Thep Maha Nakhon	not found
E100000120002	A1 Group Inc				legal entity	TRUE		United States		United States	California	not found
E100000000602	A2A SpA				legal entity	TRUE		Italy		Italy	Brescia	81560076E3944316DB24
E100000003925	A2A Airport Energy SpA		SEA Energia [former]		legal entity		https://a2aenergia.it	Italy		Italy		8945009P00HAVTAPVZ51
E100002003519	A2A Calore e Servizi SRL				legal entity	FALSE		Italy		Italy		not found
E100000002361	A2A Energiefuture SpA				legal entity	FALSE		Italy		Italy	Milano	not found
E100002016402	AAA Capital Management AO "AAA УПРАВ AAA Upravlenie Kapita				legal entity	FALSE	https://aaa.ru	Russia		Russia		253400MD780G2CR8BM30

Entity ownership connections...

Subject Entity ID	Subject Entity Name	Interested Party ID	Interested Party Name	% Share of Ownership	Data Source URL
E100000001789	Centrais Elétricas Barcarena	E100000001265	New Fortress Energy	100	https://www.globenewswire.com/news-release/2019/10/21/1932637/0/en/Golar-Power-awarded-PPA-for-605MW-LNG-to-Power-Project-in-Barcarena-Brazil.html https://ir.newfortressenergy.com/node/7571/html https://www.reuters.com/article/energia-gas-terminalgnl-idBRKBN2931E5-0BRBS
E100000001790	Companhia Energética de Minas G	E100001011531	State of Minas Gerais	17.04	https://ri.cemig.com.br/governanca-corporativa/composicao-acionaria
E100000001790	Companhia Energética de Minas G	E100001011532	FIA Dinamica Energia	15.9	https://ri.cemig.com.br/governanca-corporativa/composicao-acionaria
E100000001791	Canindé Energias	E100000003074	Gastrading Comercializadora de Energias		https://solucoes.receita.fazenda.gov.br/Servicos/cnpjreva/cnpjreva_Solicitacao.asp
E100000001792	Centrais Elétricas de Pernambuco	E100000001794	Eleticidade do Brasil		https://www.fitchratings.com/research/pt/infrastructure-project-finance/fitch-afirma-rating-aa-bra-da-la-emissao-de-debentures-da-epesa-perspectiva-estavel-21-02-2018 https://ebrasilenergia.com.br/quem-somos/ https://repositorio.simplificavarini.com.br/Banco%20de%20Arquivos/DebenturesRegistro/ELETRICIDADE%20DO%20BRASIL%20SA%20-%20EABRASIL%20-%202%20E%20-%201%20S/6%20-%20EGAS%20-%203%20AA%20AGE%20-%20Aprova%20C%20A7%20C%20A3o%20da%20CF%20-%20Poderes%20REGISTRADA%20JUCEP%2030%2001%2018....PDF
E100000001794	Eleticidade do Brasil	E100001011475	DC Energia e Participações	100	https://contracts.justia.com/companies/new-fortress-energy-llc-6251/contract/249094/
E100000001798	Faixa Preta Investimentos	E100002000335	Mercurio Holding		https://solucoes.receita.fazenda.gov.br/Servicos/cnpjreva/cnpjreva_Solicitacao.asp
E100000001801	Grupo Neoenergia	E100000000975	Iberdrola	100	https://www.iberdrola.com/conocenos/sociedades-grupo https://www.neoenergia.com/en-us/about-us/energy-future/Pages/our-history.aspx
E100000001803	Litos Energia	E100002000969	Mitsubishi Power		https://power.mhi.com/media/366921/download
E100000001804	Natural Energia Participações	E100000123261	natural person(s)		https://solucoes.receita.fazenda.gov.br/Servicos/cnpjreva/cnpjreva_Solicitacao.asp
E100000001804	Natural Energia Participações	E100002000591	Fox Energy Servicos de Energia		https://solucoes.receita.fazenda.gov.br/Servicos/cnpjreva/cnpjreva_Solicitacao.asp
E100000001804	Natural Energia Participações	E100002000592	Martins Empreendimentos, Engenharia e Participacoes		https://solucoes.receita.fazenda.gov.br/Servicos/cnpjreva/cnpjreva_Solicitacao.asp
E100000001804	Natural Energia Participações	E100002000593	Newlima		https://solucoes.receita.fazenda.gov.br/Servicos/cnpjreva/cnpjreva_Solicitacao.asp
E100000001806	Ponte Nova Energia	E100000123261	natural person(s)		
E100000001809	Prumo Logistica	E100000001086	Mubadala Investment Company	50	https://www.gna.com.br/a-gna/nossos-acionistas https://www.prumologistica.com.br/en/prumo/ https://www.upstreamonline.com/energy-transition/prumo-signs-deal-for-offshore-wind-and-green-hydrogen-in-brazil-s-acu-port/2-1-1323504
E100000001809	Prumo Logistica	E100000001197	EIG Global Energy Partners	50	https://www.gna.com.br/a-gna/nossos-acionistas https://www.prumologistica.com.br/en/prumo/ https://www.upstreamonline.com/energy-transition/prumo-signs-deal-for-offshore-wind-and-green-hydrogen-in-brazil-s-acu-port/2-1-1323504

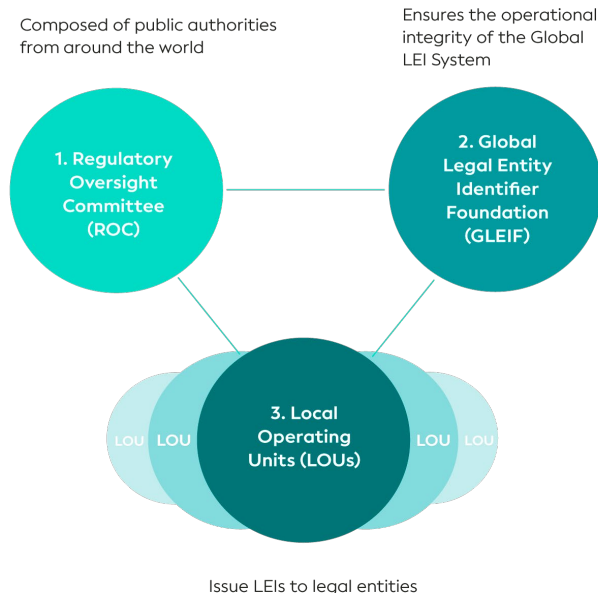
And a parent company-first format.

Parent GEM Entity ID	Parent	Project	Share	Ownership Path	Status	Capacity (MW)
E100000000339	Energetický a průmyslový holding AS	Kilroot power station GT5	100	Energetický a průmyslový holding AS -> EP UK Investments Ltd [100.0%] -> Kilroot power station GT5 [100.0%]	operating	340
E100000000339	Energetický a průmyslový holding AS	Fiume Santo power station GT1		Energetický a průmyslový holding AS -> EP Power Europe AS [100.0%] -> EP Produzione SpA [100.0%] -> Fiume Santo power station GT1 [unknown %]	mothballed	40
E100000000339	Energetický a průmyslový holding AS	Ballylumford power station B2	100	Energetický a průmyslový holding AS -> EP UK Investments Ltd [100.0%] -> Ballylumford power station B2 [100.0%]	operating	60
E100000000339	Energetický a průmyslový holding AS	Komorany power station K7	69	Energetický a průmyslový holding AS -> EP Infrastructure AS [69.0%] -> EP Energy AS [100.0%] -> United Energy AS [100.0%] -> Komorany power station K7	announced	35
E100000000339	Energetický a průmyslový holding AS	South Humber Bank power station 2	100	Energetický a průmyslový holding AS -> EP UK Investments Ltd [100.0%] -> South Humber Bank power station 2 [100.0%]	operating	580
E100000000339	Energetický a průmyslový holding AS	Tynagh power station GT1	80	Energetický a průmyslový holding AS -> EP UK Investments Ltd [100.0%] -> Tynagh Energy [80.0%] -> Tynagh power station GT1 [100.0%]	cancelled	299
E100000000339	Energetický a průmyslový holding AS	Provence power station ST1	100	Energetický a průmyslový holding AS -> Provence power station ST1 [100.0%]	operating	49
E100000000339	Energetický a průmyslový holding AS	Tavazzano power station 6	100	Energetický a průmyslový holding AS -> EP Power Europe AS [100.0%] -> EP Produzione SpA [100.0%] -> Tavazzano power station 6 [100.0%]	operating	385
E100000000339	Energetický a průmyslový holding AS	EP Energy Developments power station GT1	100	Energetický a průmyslový holding AS -> EP Energy Developments Ltd [100.0%] -> EP Energy Developments power station GT1 [100.0%]	pre-construction	350
E100000000339	Energetický a průmyslový holding AS	South Humber Bank power station 1	100	Energetický a průmyslový holding AS -> EP UK Investments Ltd [100.0%] -> South Humber Bank power station 1 [100.0%]	operating	810
E100000000339	Energetický a průmyslový holding AS	Enecogen power station U10		Energetický a průmyslový holding AS -> EP Netherlands BV [100.0%] -> Enecogen power station U10 [unknown %]	operating	435
E100000000339	Energetický a průmyslový holding AS	Enecogen power station U20		Energetický a průmyslový holding AS -> EP Netherlands BV [100.0%] -> Enecogen power station U20 [unknown %]	operating	435
E100000000339	Energetický a průmyslový holding AS	Tavazzano power station GT8	100	Energetický a průmyslový holding AS -> EP Power Europe AS [100.0%] -> EP Produzione SpA [100.0%] -> Tavazzano power station GT8 [100.0%]	retired	320
E100000000339	Energetický a průmyslový holding AS	Ballylumford power station C32	100	Energetický a průmyslový holding AS -> EP UK Investments Ltd [100.0%] -> Ballylumford power station C32 [100.0%]	operating	300
E100000000339	Energetický a průmyslový holding AS	Ostiglia power station OS5, timepoint 1	100	Energetický a průmyslový holding AS -> EP Power Europe AS [100.0%] -> EP Produzione SpA [100.0%] -> Ostiglia power station OS5, timepoint 1 [100.0%]	pre-construction	890

Who is the Global Legal Entity Identifier Foundation (GLEIF)?

- GLEIF is a not-for-profit Swiss foundation, founded by the Financial Stability Board (FSB)
- GLEIF is overseen by the [Regulatory Oversight Committee](#) (ROC) with
 - 70 regulators and
 - 19 observers
 - from 50 countries
- GLEIF Board has 18 independent directors
- 38 accredited partners for LEI issuing (LOUs) and growing
- > 3 million LEIs as of today, available as open data without IP or copyright protection

The Financial Stability Board (FSB) and the Group of Twenty (G20) have endorsed the LEI, Global LEI System and GLEIF.



Legal Entity Identifier (LEI) and Key Reference Data

Who is who? Who owns whom?

"Level 1"

LEI Code G5GSEF7VJP5I7OUK5573 ⓘ

(Primary) Legal Name	BARCLAYS BANK PLC
Registered At	Companies Register (Companies House) Companies Register (Companies House) England and Wales, United Kingdom of Great Britain and Northern Ireland RA000585
Registered As	01026167
Jurisdiction Of Formation	GB
General Category	GENERAL
Entity Legal Form	Public Limited Company (en) Cwmni Cyfyngedig Cyhoeddus (cy) B6ES
Entity Status	● ACTIVE
Entity created at	1971-10-04 01:00:00+01:00
BIC Code	BARCGB22XXX
MIC Code	BPLC

- EntityID & Authoritative source, Mappings, Address information (...)

"Level 2": Parents, children & fund relationships

Parents	Published Relationship ⓘ Lapsed Relationship ⓘ Reporting Exception ⓘ
BARCLAYS PLC ⓘ (Direct Parent) ⓘ	BARCLAYS PLC ⓘ (Ultimate Parent) ⓘ
Direct children (85)	Published Relationship ⓘ Lapsed Relationship ⓘ
BARCLAYS BANK PLC	
台灣巴克萊證券股份有限公司 ⓘ (Direct)	
BARCLAYS OCIO SERVICES LIMITED ⓘ (Direct)	
ISLE OF WIGHT HOME LOANS LIMITED ⓘ (Direct)	
NORTHWHARF NOMINEES LIMITED ⓘ (Direct)	
Managed Funds (40)	Published Relationship ⓘ Lapsed Relationship ⓘ
INSIGNIA 80% PROTECTED EQUITY FUND ⓘ (Managed Fund)	
SHILLER US SECTOR INDEX FUND ⓘ (Managed Fund)	
BARCLAYS US EQUITY INTRADAY MOMENTUM FUND ⓘ (Managed Fund)	
Branches (3)	Published Relationship ⓘ Lapsed Relationship ⓘ
BARCLAYS BANK PLC PARIS BRANCH ⓘ (Branch)	
Barclays Bank PLC ⓘ (Branch)	
英国巴克莱银行有限公司上海分行 ⓘ (Branch)	

- GLEIF API: <https://api.gleif.org/docs>
- LEI Search: <https://search.gleif.org>
- Golden Copy: <https://www.gleif.org/en/lei-data/gleif-golden-copy>

GEM already has LEIs integrated into its own data and is working to integrate GEM Entity IDs into GLEIF.

- GEM Entity ID to be added to GLEIF entity pages
- Crosswalk document will be published and available for download on the GLEIF website
 - Updated roughly once a month (or whenever a GEM asset tracker has a new release)
- Links to each relevant GLEIF entity pages embedded in GEM Ownership tracker dataset

GEM Entity ID	Full Name	Global Legal Entity Identifier Index
E100002005185	Akçansa Çimento Sanayi ve Ticaret AŞ	789000E4UZB42H2HX767
E100000002141	Akenerji Elektrik Üretim AŞ	7890006JO4YATIQAG941
E100001014067	Aker BP ASA	549300NFTY739200YK69
E100001014068	Aker Capital ASA	5493004SEKKPH2GS1D50
E100001000634	Akfen Yenilenebilir Enerji AŞ	984500C9EC85457B3E55
E100001000635	Akkan Enerji ve Madencilik AŞ	894500OLC7T8S2AR9O59
E100001011231	Akkök Holding AŞ	789000NHUUC7523GX39
E100002005195	Akmenes Cementas AB	549300PNKQ2BHZ2TI065
E100002003740	Akora Resources Ltd	213800G8DFDRQAASP451
E100000002409	Aksa Akrilik Kimya Sanayii AŞ	789000OKY3ICX0Y2NY41
E100000002411	Aksa Enerji Uretim AŞ	789000KQC5JTW1S3JG98
E100000000735	Akzo Nobel NV	724500XYIJUGXAA5QD70
E100000002418	Alabama Power Co	ORL818ELFOHP5JHOFU19
E100002016488	Alaska Permanent Fund Corp	DFKMC7AUPF2H39L1JO20



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Opportunities from Data Interoperability

- **Asset-level Data**
- **Independent Verification of Financed Emissions**
 - GEM is the ownership data lead at the Climate TRACE coalition
- **Increased ownership data granularity**
 - All levels of ownership (subsidiaries, SPVs, etc.)
 - 5% threshold
 - Citations and most recent research date included

You can search from a company-first or an asset-first perspective

View fossil fuel plants and mines whose ownership is obscured by nominee companies

Filter projects:

View all projects where project info (project name, owning energy company, nominee company, project type, or project status) contains text above

51 projects

Matching Projects

▼ Bayswater power station Coal Plant with nominees Citicorp, JPMorgan, HSBC

Operating **Coal Plant with Units 1–4** in New South Wales with capacity 2665 MW.

Emissions: 18 Mt (Million tonnes of CO₂) annually

Ownership: One of 8 projects owned by *AGL Energy Ltd*

Nominees: Citicorp, JPMorgan, HSBC provided services obscuring owner(s) with a combined 35.9% stake in *Bayswater power station*

▶ **Eraring power station** Coal Plant with nominees Citicorp, JPMorgan, HSBC

▶ **Loy Yang A power station** Coal Plant with nominees Citicorp, JPMorgan, HSBC

▶ **Barker Inlet power station** Gas Plant with nominees Citicorp, JPMorgan, HSBC

▶ **Darling Downs power station 1** Gas Plant with nominees Citicorp, JPMorgan, HSBC

▶ **Isaac power station** Gas Plant with nominees Citicorp, HSBC

▶ **K2 power station 1** Gas Plant with nominees Citicorp, JPMorgan, HSBC

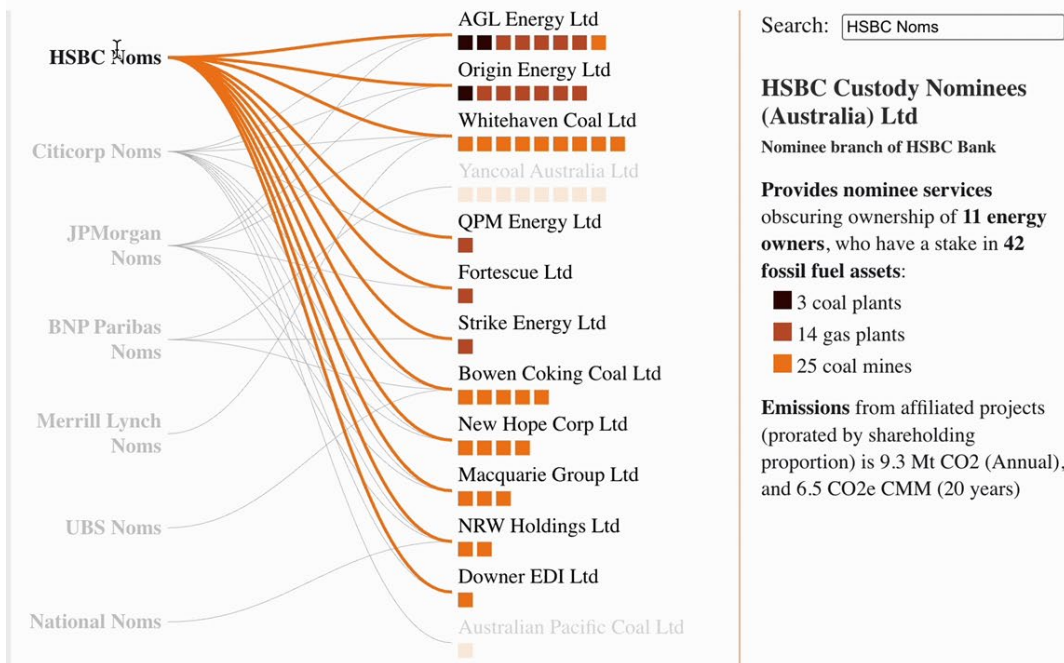
▶ **Kwinana Swift power plant** Gas Plant with nominees Citicorp, JPMorgan, HSBC

* Example from recent GEM report on Australian nominee companies

Emissions can be aggregated up from any asset to any parent

A handful of nominee companies dominate ownership of some of Australia's biggest energy companies.

At least thirteen energy companies, with combined ownership stakes in 51 fossil fuel projects, have their own owners obscured by nominee companies. Use the search bar below or hover or click on the chart to see more information about each nominee company and energy owner.

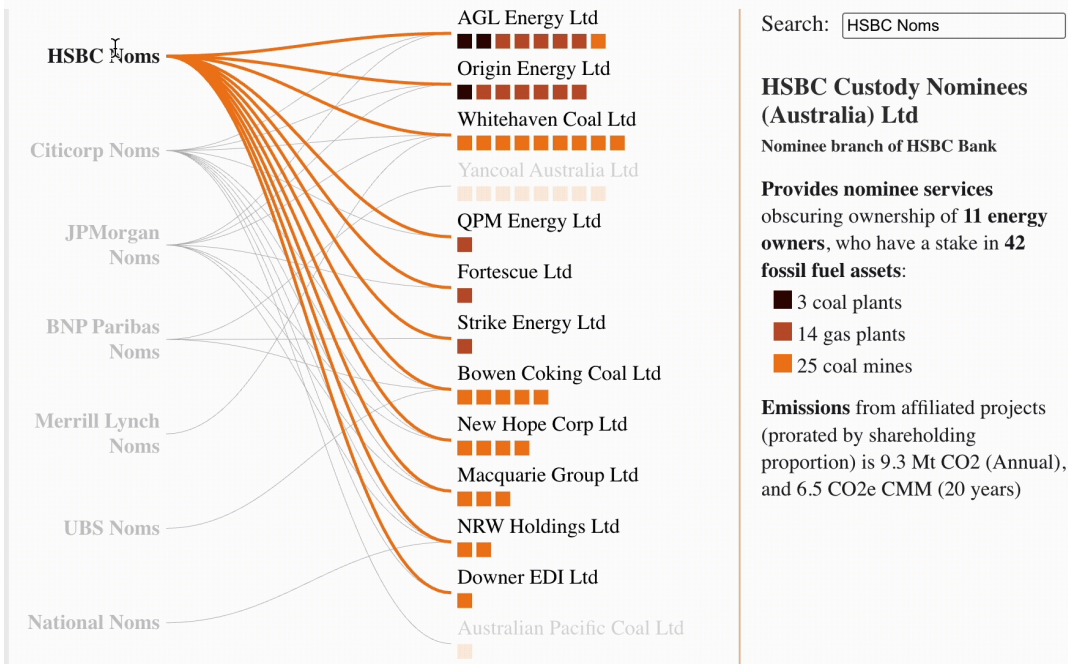


* Example from recent GEM report on Australian nominee companies

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Thank you