TOPIC 1: OWNERSHIP OF MINERALS AND NATURAL RESOURCES

Preliminary

- Energy law: 'the allocation of rights and duties concerning the exploitation of all energy resources between individuals, the federal government, and the states.'
- Energy law includes finite and non-finite energy reserves: oil, natural gas, coal, uranium (nuclear energy), solar energy, wind energy, wave energy, tidal energy, ocean thermal energy conversion, hydro-electricity byomass, hydrogen and geothermal energy.
- All minerals and hydrocarbons are owned by state. The idea behind this is that the resource benefits the entire community.
- The production of energy is a vitally important industry for Australia (and globally).
    - Demand for energy increases as population increases.
    - Energy facilitates a large number of things we do.
    - People use it for a range of devices – appliances in kitchen (fridge, oven), computer, phone
- The production of energy naturally affects the environment, and can have a dramatic impact in some cases.
- The production of land-based energy can impact land ownership for all landowners – i.e. freehold estates and native title.

How do we regulate energy?

- Energy law regulates the exploitation of energy resources.
- Regulated by the state and subject to ownership principles.
- Both domestic and international law is applicable.
    - GATT Treaty (General Agreement on Tariffs and Trade) and UNCLOS (United Nations Law of the Sea) may be relevant
- Important regulatory areas: pipelines regulations (especially for domestic gas), the protection of confidentiality and rights to intellectual property, project security, the construction of petroleum contracts, project financing, native title rights, and the scope and sufficiency of environmental safeguards)
    - Pipelines get gas to the consumer
- Non-renewable resources: petroleum, oil, gas minerals
- Renewable energy resources: solar, wind energy, hydro-electricity
- We are attempting to move away from non-renewable resources to renewable energy to meet environmental objectives. The impact of extraction and water depletion, contamination, destruction of habitat is catastrophic.
- Government has to regulate and balance the desire for energy production with the impact it will have on the environment.
- Note that Australia has sold off large amounts of gas in the Bass Strait. Gas is cleaner, cheaper and more efficient than coal. However, the Government has failed to impose controls on export, or mandate big procedures to reserve an amount of gas for domestic consumption.
- Have to properly regulate the energy market to prevent monopoly – ensure that companies don't charge too much etc.

Who owns the resources?

- **COMMON LAW** (abrogated by statute) *'cuius est solum eius est usqye ad coelom et ad inferos'* (the person who owns land owns it from the heavens above to the centre of the earth below.'
    - This maxim is traceable back to 1285 English land law. However, this maximum has

been criticised in *Commissioner for Railways v Valuer General [1974]* "its use, "whether with reference to mineral rights, or trespass in the air space by projections, animals or wires, is imprecise and is mainly serviceable as dispensing with analysis."
    - I.e. not realistic to own land down to the centre of the earth
- At common law, in order for subsurface minerals/geological ownership to be taken away from the ownership bundle of the surface estate owner, necessary for there to be an express grant, crown reservation, royal prerogative or statutory vesting.
    - All of these have occurred, which has resulted in a significant medication of the common law maxim.

***Star Energy Onshore Ltd v Bocardo Ltd* [2010]**

- Bocardo sued Star Energy for trespass
- Star Energy was drilling for petroleum and the pipes went under B's land.
- The company had a licence to extract petroleum but did not have B's permission to lay pipelines under his land. Therefore, breached common law ownership of B.
- The wellhead was on neighbouring land, however, the drilling pipelines descended to a depth of 2,800 feet under the adjoining land (Bocardo).

HELD:

- Common law position was REVISED: By presumption, the registered freehold proprietor of the surface will also be the owner of strata beneath the surface including minerals unless there has been an express or implied alienation to another at common law or statute.
- Court held that the common law maxim should not be taken literally as it would lead to absurdities (not possible to own everything down to the centre of the Earth)
    - '…extended down as far as the point at which physical features such as pressure and temperature render the concept of the strata belonging to anybody so absurd not worth arguing about': *Mitchell v Mosley [1914]*
- The plaintiff's surface ownership, did, however, extend sufficiently downwards to prevent others from interfering with minerals under the surface.
- The right of the licensee to extract (pursuant to the licence) was only over the authorised area and this did not include Bocardo's land.
    - Laying drilling pipelines in the subsurface strata of neighbouring properties was beyond the scope of the licence and went beyond what was reasonable.
- While Star Energy trespassed by laying pipelines, there was no loss of enjoyment. Therefore, damages were nominal.
- Supreme Court affirmed the decision from the Court of Appeal
    - The maxim is not a literal tool – however, it retained some utility as a general guide.
- Damages are reflective of core principles underpinning compulsory purchase valuations in that 'compensation for the compulsory acquisition of land cannot include an increase of value…' effectively, the value is now what the grantee is gaining but rather what the grantor is losing.
- Lord Hope stated that "…but the wells that are at issue in this case, extending from about 800 feet to 2,800 feet below the surface, are far from being so deep as to reach the point of absurdity. Indeed, the fact that the strata can be worked upon at those depths points to the opposite conclusion. I would hold therefore that Bocardo's title extends down to the strata through which the three wells and their casing and tubing pass.'

Common Law Position modified by statute

1. Endorsement of the Royal Prerogative
    a. *Cadia Holdings* confirmed enforceable in Australia, having been adopted by colonial jurists, and has an application to royal minerals: gold and silver.

b. Gold and silver even when intermingled with other minerals – e.g. copper will continue to belong to the crown, despite the issuing of a grant and the crown not reserving those minerals.
c. The royal prerogative does not allow the crown to enter and take the metal from the mines, however, where royal metals are discovered, royalties will be payable to the crown.

2. Crown reservations
    a. Many crown grants of land contain express reservations of minerals to the crown.
    b. Mainly relevant in NSW, where distinction between crown minerals (reserved) and private minerals (non-reserved)
3. Statutory vesting of minerals
    a. Legislation has vested ownership of subsurface minerals and petroleum in the crown.
    b. No compensation provided to land owners.
    c. Definition of minerals and petroleum is broad and specifically includes newer forms of resources such as coal seam gas (CSG).
        i. CSG included in definition of resources minerals under *Minerals Resources and Sustainability Act.*

Public Ownership Framework: State Owns the Minerals

- Common law: Surface estate owner owns minerals
    - This is abrogated by statute (diminishes rights of property owners)
        - Public ownership framework sets out that all minerals and resources in the ground are owned by the state (surface estate owner owns everything in the land down to a reasonable level – 2,800 feet)
- Statute vests resources in the Crown and this contributes a 're-vesting' of ownership rather than the creation of any new statutory interest:
    - K. Gray, 'Regulatory Property' [2010] 32(2) Sydney Law Review 237 at 245: the 'conceptual apparatus of private property' has been 'reconfigured' to accommodate 'regulatory property' which is a necessary correlative of statutory property.
- States are not subject to just compensation provisions: s51(31) of the Constitution
- Prospective operation in all states apart from SAN, NT and VIC, where it is retrospective ownership of the minerals:
    - *Crown Lands Act* 1884 (NSW), s 7
    - *Land Act 1891* (Vic) s 12
    - *Mines Act 1891 (No 2)* (Vic) s 3
    - *The Mining on Private Land Act 1909* (Qld) ss 6, 21
    - *Crown Lands Act 1888* (SA) s 9
    - *Mining Act 1904 (WA)* s 117
    - *The Crown Lands Act 1905* (Tas) s 27

Victoria

- All minerals are vested in the Crown pursuant to *s 9 Mineral Resources (Sustainable Development) Act 1990 (Vic) (MSRD)*
- MRSD defines 'mineral' under s 4 (which form naturally as part of the earth's crust)
    - Oil
    - Coal
    - Alluvial minerals (e.g. titanium and zirconium) and
    - Naturally occurring hydro carbons contained in oil shale or coal, CSG
- Does not include:
    - Petroleum
    - Water

- Stone
- Peat

Petroleum

- Petroleum is expressly excluded from the definition of minerals in the MRSD.
- Petroleum is defined broadly to include any naturally occurring hydro carbon, whether in a liquid, gaseous or natural state.
- Petroleum on or below the land is vested in the Crown pursuant to *s13 Petroleum Act 1998*
    - S 6(2) expressly excludes naturally occurring hydro-carbons contained within a deposit of coal or oil shale. This would appear to exclude coal seam gas from the application of the PA.
    - Ownership of petroleum remains with the Crown despite any Crown grand of land: s 14.
    - Unconventional gas, such as coal seam gas, is located in difficult to reach reservoirs, therefore more environmental impact and difficult to extract.
- Need consent of landowner before operation starts on private land: *s128 Petroleum Act*
    - Consent of landowners or compensation agreement or tribunal ruling of compensation amount.

Can you get a resource title to get on shore gas in Victoria at the moment?

- No – there is currently a moratorium
- All on shore conventional and unconventional gas is suspended for 5 years while they try and work it out – worried that drilling will deplete water

Dimensional Land Ownership

- The notion of land as three dimensional has facilitated the legal acceptance of subdivisions which can be either horizontal, or vertical, or both: Superannuation Fund v Clough Property Fairmont Pty Ltd [2010] WASCA 232 at [22].
    - The ownership of land can be divided in different ways and the common law maxim is purely a starting point
    - I.e. Government owns the resource, licenses it out to a company to extract. However, ownership of the resource doesn't necessarily give you the right to enter the land

Future issues (Topic 10)

- CCS technologies – carbon being stored into land which migrate laterally into adjoining land (no emissions)
    - Will this constitute trespass?
    - Some legislative provisions
- Geological storage formation is essentially space that exists sub-surface
- Not an extractive resource – thus separate to mining
- Potential value for a carbon economy where a cap is placed upon emissions

Greenhouse Gas Geological Sequestration Act 2008 (Vic)

- Makes it clear in s 14(1) that '*the Crown owns all underground geological storage formations below the surface of any land in Victoria'*
- s 14(2) that 'the Crown is not liable to pay any compensation for any loss that that might cause'
    - Seepage can occur, which may have detrimental effects on crops (but may only take years for it to impact the land)
    - Appears that the land owner may not have many options to seek legal redress
        - Complying with environmental conditions?
        - Might be seepage? Migrates out of reservoir? What then?

        - Effect on crops? No compensation?
        - May only take a few hundred years to impact the land
        - What capacity would land owner have to seek legal redress?
        - Will this constitute trespass?

The Greenhouse Gas Act (Vic)

- Creates ownership certainty and the legislation has been described as 'ground breaking' because it reduces perceived industry risk and lower transaction costs.
- The scope of the definition in the Act covers underground geologic storage formation.
    - This is not defined although the regulations (Reg 16) requires any discover of 'geo-scientific properties' of sub-surface storage 'discovery' to be given to the Minister to ensure that the portfolio of titles is accumulating.

Offshore Petroleum and Greenhouse Gas Storage Act 2010 (Vic)

- Covers offshore geologic storage and which vests ownership of underground geologic formation in the Crown (per s65)
- Because legislation in all states and territories of Australia vest the ownership of minerals in the Crown – the ownership of 'surface' land, ownership of minerals and ownership of 'sub-surface storage' are regarded as separate forms of ownership.
- Ownership of gold and silver (located in the strata) vest in the Crown pursuant to the royal prerogative rather than a statutory vesting provision.

The Royal Prerogative – Rights to Gold and Silver

- The right in the Crown to mines of gold and silver was judicially recognised in the Case of Mines in 1568 1 Plowden 310 [75 ER 472].
    - In this case, it was held that the component of the prerogative was the 'liberty to dig and carry away ores thereof, and with other such incidents thereto as are necessary to be used for the getting of the ore.'
    - The right was classified in Hale's scheme of the prerogatives as Census Regalis ("of the King's Revenue") – incidental to the crown
    - Gold and silver are owned by the crown as were regarded as precious metals that the crown owns because the monarchs character which 'draws in to things of an excellent nature'
- Ownership of gold and silver vest in the Crown pursuant to the Royal Prerogative, rather than statutory vesting provisions
    - HCA affirmed: ***Cadia Holdings Pty Ltd v NSW*** **(2010) 269 ALR 204**
    - The application of the prerogative to Australia was confirmed in *Millar v Wildish* (1863).

Cadia Holdings Pty Ltd v NSW **(2010)**

Facts

- The mine was a copper and gold mine
    - Gold = royal prerogative, copper = private minerals
- Therefore, it did not preclude it from being utilised
- No express reservation of copper included in the Crown grant for gold and silver (but note that copper is often inseparable from gold)

Held

- Right of entry was found to be a 'logical incident' of the prerogative, but not a necessary condition of its existence.
- Hence, the inability of the crown to enter land without authority should not be regarded as denying the existence of the prerogative
- The majority (Gummow, Hayne, Heydon and Crennan JJ at [104]) held that 'the proprietor of

any mine in which there was copper might hold and work the mine notwithstanding that the mine might be claimed to be a royal mine
    - Even if gold and silver intermingled with other minerals, continues to belong to the crown
    - In summary, the Crown is not allowed to enter the mine and take the metals, but where royal metals are discovered, royalties are payable to the crown
- Royal prerogative may only be modified or abrogated expressly or where implication is clear and in the circumstances necessary.

Summary Impact of Statutory Vesting

- Statutory vesting provisions confer ownership to valuable mineral resources such as coal, petroleum and coal seam gas ('CSG') in the Crown.
- This modifies common law ownership rights that private owners may have in the land and the sub-surface strata.
- Statute vests resources in the Crown and this constitutes a '**re-vesting' of ownership** rather than the creation of any new statutory interest:
- The 'conceptual apparatus of private property' has been 'reconfigured' to accommodate 'regulatory property' which is a necessary correlative of statutory property.'
- *Disaggregation of each form of ownership difficult because resources reside within the land.*
- Access issues can be contentious – esp with CSG drills in NSW

Victoria

- Legislation vests all minerals to the Crown (unless they are subject to a mineral exemption)
    - *Mineral Resources (Sustainable Development) Act 1990* (Vic), s 9

New South Wales

- Legislation now makes it clear that the Crown has the power to issue a mining licence, but the scope of the royal prerogative is not affected
    - *Mining Act 1992* (NSW), s 379
    - Confirmed in *R v Wilson* (1874)
- NSW draws a distinction between a publicly owned mineral (a mineral that is owned or reserved by the crown) and a privately owner mineral (a mineral that is not owned or reserved by the crown)
- *Mining Act 1992:* abrogates Crown right of entry for the purpose of exercising prerogative rights (gold and silver0
- Majority concluded in Cadia that copper was a 'private mineral because the royal prerogative had been 'abridged' by the public/private distinction in NSW by the time the mine was created on Cadia's land
- Other minerals:
    - Coal Acquisition Act 1981 (NSW) vests all coal in the Crown
    - Petroleum (Onshore) Act 1991 (NSW) vests petroleum, helium, or carbon dioxide in a natural state, on or below any land, to be the property of the Crown and to have been so always
        - Petroleum defined in **s3** to include any naturally occurring hydro-carbon, whether in a gaseous, liquid or solid state but not coal, oil or shale which is defined as a mineral under the Mining Act 1992 (NSW).

Water Rights

- At common law, if there was water adjacent to your possessed land, it belonged to you.
- This has been replaced by statutory schemes. There is no riparian ownership, and water management is vested in the Crown.
    - *Water Act 1989 (Vic), s 7;* Water management is vested in the Crown
    - *Water Management Act 2000* (NSW)*,* ss392-393
- The statutory schemes that evolved in Australia better equipped to consider physical and socio-cultural landscape of Australia and different climactic, ecological and hydrological conditions.
- Rights to water exists separate from ownership of land. In order to extract water, have to apply for a licence from the state.
- Under the National Water Initiative, statutory water entitlements (licences) may be traded.
- Water entitlements in the Murray Darling Basin are governed by the *Water Act 2007 (Cth).* The Murray Darling Basin Plan imposes sustainable limits on the quantity of water that may be taken.
    - The Murray Darling Basin is a national area of significance. It is a massive basin. Not regulated well by the Federal government as too much water is being taken out.
- Trading on entitlements in the Murray Darling must not increase water commitments already granted: *Schedule 3, Water Act 2007 (Cth)*

Solar and Wind Power

- Not feasible to impose ownership rights upon free resources such as wind and solar, which lack any tangible or defined presence
- The core rights to construct and develop renewable wind and solar projects centre on access entitlements
    - Right to access land to construct wind farms and solar light is vital
    - Access entitlements not protected under common law
    - Need to enter into private agreements with land owners – however, enforceability is limited as not a property right
    - Efficient, clean, regenerative
- Solar provides 0.3 % of global electricity and wind power generates up to 3%.
    - These rates are increasing
    - The International Energy Agency predicts that by 2035, wind and solar may be producing 10% of global electricity
- Wind and sun are clean, emitting no pollutants and are essentially never-ending.
    - Renewable resources are regenerative and therefore have no corporeal existence
- For the foreseeable future, wind and solar will supplement, rather than supplant (displace) conventional energy sources
- Modern electrical system is largely predicated on the use of fossil fuels: coalmines, gas fields, railroads, pipelines ships which are established
- The creation of electric energy via wind/solar is regulated in Victoria pursuant to the *Electricity Industry Act 2000* (Vic) and requires applicants to seek a licence: s 18
- Issues can arise with renewable energy:
    - To generate wind power, you need wind. To generate solar power, you need the sun to be shining. Therefore, problems in terms of security.
    - New transmission lines must be built to transport wind/solar energy. Subsidies are therefore required.
    - Renewable resources are regenerative and therefore have no corporeal existence. This means that the resource cannot be owned. However, the means of producing it can be regulated.
    - Need consent from landowners to install infrastructure and facilities to generate

renewable energy – what is the incentive to do that?
- Trilemma – *security, production and sustainability*

Regulating Electricity in Australia
- The creation of electric energy is regulated in Victoria pursuant to the *Electricity Industry Act 2000.*
    - This Act regulates the creation of electricity and requires applicants seeking to create electricity to seek a licence: *s18*
- Australian Energy Market Commission - set up in SA and confirmed in Australian Energy Market Act 2004 (Cth) sets up a National Energy Retail law.

Australian Energy Regulator
- The AER Regulates energy markets and networks under national energy market (NEM) legislation and rules.
- It applies mostly to energy markets in Eastern Australia and South Australia (not Western Australia)
- Roles include:
    - Setting prices charged for using energy networks (poles, wires and gas pipelines) to transfer energy to customers
    - Monitoring wholesale electricity and gas markets to ensure supplies comply with regulations
    - Regulating retail energy markets - enforcing compliance with retail legislation, authorising retailers to sell energy, approving retail policies, reporting on retail performance, educating consumers about energy rights
    - Publishing relevant information
    - Assissting the ACCC with energy related issues arising under the ACCC – (See National Gas Laws)

Australian Energy Market Operator (AEMO)
- AEMO operates Australia's National Electricity Market (NEM), the interconnected power system in Australia's eastern and south-eastern seaboard, and the Wholesale Electricity Market (WEM) and power system in Western Australia.

AEMO
- The National Electricity Market (NEM) incorporates around 40,000 km of transmission lines and cables.
- It supplies about 200 terawatt hours of electricity to businesses and households each year.
- It supplies around 9 million customers.
- It has a total electricity generating capacity of almost 54,421 MW (as at December 2017).
- $16.6 billion was traded in the NEM in the financial year 2016–17.
- Strategic reserves of demand and generation resources of more than 1000 MW for 2017-18.
- The NEM commenced operation as wholesale spot market in December 1998. It interconnects five regional market jurisdictions – Queensland, New South Wales (including the Australian Capital Territory), Victoria, South Australia, and Tasmania.
- Western Australia and the Northern Territory are not connected to the NEM.
- The NEM involves wholesale generation that is transported via high voltage transmission lines from generators to large industrial energy users and to local electricity distributors in each region, which deliver it to homes and businesses.
- The transport of electricity from generators to consumers is facilitated through a 'pool', or spot market, where the output from all generators is aggregated and scheduled at five-minute intervals to meet demand.
- The pool is not a physical thing, but a set of procedures that AEMO manages in line with the

National Electricity Law and Rules.

- The NEM uses sophisticated systems to send signals to generators instructing them how much energy to produce every five minutes, so production is matched to consumer requirements.
- Current energy price can then be calculated.
- NEM infrastructures comprises state and private assets managed by industry participants.