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Energy futures, state planning policies and coal mine contests in rural New South
Wales

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Abstract

The United Nations 2015 Climate Change Conference established a framework for keeping global temperature increase “well below” two degrees Celsius through commitments by the parties to significant reductions in greenhouse gas emissions.

The agreement has implications for the energy policies of all countries, not least major coal exporters like Australia. By contrast, the government’s 2015 *Energy White Paper* lays out the vision for the country’s future as a “global energy superpower” dominated by the export of fossil fuels for decades to come. Legislative frameworks

around planning, land use, mining, heritage and environment have moved in synchrony with this agenda. Rural landowners in the big coal rich geological basins of Australia are directly impacted by current government policies on energy exports and on domestic supply. This article follows the coal value chain to rural communities in New South Wales where new mines are being built, and analyses the politics of land use, natural resources and energy from the vantage point of landowner engagement with government and corporations in the policy, legislative and regulatory domains. The need for more equitable, democratic and precautionary approaches to energy policy, heritage and environmental planning and agricultural land use is highlighted.

Keywords

coal mining, rural communities, Australia

Introduction

In his work on “carbon democracy”, Timothy Mitchell asks the question, “Are [democracies] tied in specific ways to the history of carbon fuels?” (2009: 400). In arguing for the interdependence of carbon and democracy, Mitchell’s theory connects attributes of fossil fuels to relations of production and circulation, workforce mobilization and forms of democratic governance. He focuses on oil and the degradation of democracy; coal is his comparative case. He assumed that the era of coal (mined underground), also the era of industrial democracy and growth of workers’ rights, ended in the mid-twentieth century, to be replaced by oil. He also presaged the decline of oil, assuming that there is and will continue to be a decline of carbon-based energy in the twenty-first century. His view of the waning of coal is

shared by critical financial analysts of the seaborne thermal coal trade (e.g. see Buckley, 2015). It seems however that we are in a second era of coal, raising fresh questions about energy policy, sustainability and democratic governance in carbon intensive economies like Australia, complicated by international momentum to address global warming to which the combustion of coal for energy is a significant contributor. In this article I follow the coal value chain to rural communities in New South Wales (NSW) where new mines are proposed, and analyse the politics of land use, natural resources and energy futures from the vantage point of landowner engagement with states and corporations in the policy, legislative and regulatory domains. I focus on the shift from coexistence to conflict as the scale of Australian coal mining has increased. This phenomenon is particularly evident where mines encroach on other land uses in settled agricultural areas (Measham et al., 2013). I argue that the fractious politics of coal expose failures of energy policy, democratic governance and citizens' rights that threaten future ecological stability and economic well-being.

The world is experiencing a glut of fossil fuels, attributable as much to geopolitics and competitive overproduction as to new technologies of extraction and the expanding demand for cheap energy in emerging economies. Prices of all fossil fuel commodities are declining (Krauss, 2015; Loh, 2015). Coal is the most abundant fossil fuel, with almost 900 billion tonnes of proven coal reserves (of varying grades and qualities) in 70 countries, enough for 112 years at current rates of consumption (World Coal Association (WCA) 2015). Coal reserves have about twice the lifespan of conventional oil and gas reserves at current rates of usage. In 2013, global production of coal (all types combined) was almost 8 billion tonnes (70 per cent

above 2000), and demand is expected to grow by 2.1 per cent through to 2019 (International Energy Agency (IEA) 2014).

In many economies, coal is the cheapest source of energy if toxic externalities – damage to ecologies, human health and well-being, or the atmosphere – are not counted as costs (especially as costs of doing business, or of state formation and power). Coal has been burned in ever increasing quantities since the invention of the coal-fired steam traction engine in the eighteenth century and the associated growth of industrial economies. Most coal is used for energy (thermal coal) and about 15 per cent goes to the production of steel (WCA, 2014a). By 2013 coal accounted for 46 per cent of world fuel emissions, or over 14 billion tonnes of Co₂ (IEA, 2015). Despite initiatives by international bodies and governments to implement emissions reductions policies, persistent coal dependence can be discerned in national energy plans, industry projections and weak international climate change protocols. Based on projections of the United Nations Intergovernmental Panel on Climate Change (IPCC) (2014), global coal consumption would have to fall to 3.3Bt by 2035 to achieve the two degree cap, that is, 4.5bt below 2013 production levels of 7.8 Bt (WCA, 2014b). Current projections of the IEA are for 6.5 Bt of coal consumption in 2040 (IEA WEO 2014 Factsheet). At the same time, critical industry analysts now assert that the seaborne thermal coal trade is in “structural decline” (Institute for Energy Economics and Financial Analysis, 2015) or at least that coal is “losing the public relations battle”, as the president of BHP Billiton’s coal business recently commented (Ludlow, 2015).

Coal and energy: policy directions and legislative frameworks

In Australia's fossil fuel intensive economy, black coal is the second-largest export commodity and the source of most domestic electricity. The coal rich regions of NSW and Queensland are zones where the costs and benefits of coal for human health, employment and livelihoods, state revenue, electoral outcomes, economic growth and ecological sustainability are all contested (Carrington and Pereira, 2011; Duus, 2013; Loechel et al., 2013; Moffat and Baker, 2013; Cheshire et al., 2014; Coliaguri and Morrice, 2015; Everingham et al., 2015). The Australian "resources boom" which took off in the first few years of the millennium (Garnaut, 2008; Saunders, 2015) was largely dependent on exports of coal and iron ore to growing Asian economies. The percentage of coal exported has steadily increased, reaching 88 per cent (375 million tonnes) of total production in 2013-14 notwithstanding the official end of the resources boom in 2011 (Bureau of Resources and Energy Economics (BREE) 2014: 70). Australia ranks fourth for world black coal production, with mining dominated by a small number of transnational corporations (including Peabody, BHP Billiton, Rio Tinto, Glencore, Anglo American and Mitsubishi Corporation) which account for about three-quarters of production (BREE, 2014: 70-3).

The Australian government's *Energy White Paper* (Department of Industry and Science, 2015) lays out the vision for the country's energy future as a "global energy superpower" dominated by the export of fossil fuels for decades to come. The *White Paper* prefigures a policy framework prioritising deregulation of energy industries, increased productivity and workforce skills, investment in new technologies, and growth of fossil fuel exports to the expanding economies of Asia. In the wake of the

December 2015 United Nations Conference of Parties 21 (COP21) in Paris, there is no sign of an alternative being flagged for the Australian economy despite the consensus agreements to limit global warming to two degrees or less.

In the state of NSW, where the research for this article was undertaken, coal has been mined since the first years of British settlement in the late eighteenth century (Connor, 2016: 46-9). In 1945 regulation of mining resided in planning amendments to the *Local Government Act* – mine proposals were the responsibility of council authorities, elected by local residents and responsive to their expectations. Policies and legislation have become progressively more centralised at the state government level and distant from the local. Policies regulating mining and transport infrastructure for coal are now embedded in dedicated environmental planning legislation that was first introduced in the *Environmental Planning and Assessment Act (EP&A Act)* in 1979 (Park, 2010) and associated Environmental Planning Instruments. This legislation has been amended many times, with several waves of major reform. The stated objectives of the original EP&A Act prioritised economic growth and social welfare through environmentally responsible development of the state’s “natural and man made resources”, allowing for community participation in proposal development, and shared coordination of planning among state, local government and private stakeholders (Park, 2010: 2). The federal government vision of a “global energy superpower” status was just over the horizon at this time. This vision has subsequently become a prominent part of NSW government planning and economic strategy, as black coal has become the state’s premier export and the industry has expanded its contribution to revenue flow, Gross Domestic Product, and terms of trade, in concert with the rapid industrialisation of Japan and then other East

Asian nations. I contend that the priority placed on fossil fuel commodities in economic development and export growth now overshadows the other objectives of the original legislation – social welfare, environmental protection and shared coordination – to the detriment of rural communities and agricultural producers who, as Everingham et al. argue, are experiencing “a systematic loss of control over resources” (2015:42).

Within the EP&A Act, coal mine proposals were defined as “major projects” and were removed from Local and Regional Environmental Plans, coming under the aegis of State Environmental Planning Policies (SEPPs). A uniform system of environmental, social and economic impact assessment was introduced, with Ministerial authority to override local government consent authorities when deemed “in the public interest to do so, having regard to matters of significance for State or regional environmental planning” (Section 101 EP&A Act 1979, cited in Park, 2010: 3). As the scale of coal mining expanded to meet rising East Asian demand, and more productive but environmentally destructive open cut mines replaced worked-out underground mines, land-use conflicts intensified. Landowners’ common law rights to sub-surface minerals were progressively diminished. In 1981, the NSW government passed the Coal Acquisition Act, followed by the Coal Ownership (Restitution) Act 1990 vesting ownership of coal deposits in the Crown. Rights of the Crown to minerals including coal were applied to Aboriginal lands under section 45(2) of the Aboriginal Land Rights Act (1983). A new planning category, State Significant Development (SSD), was introduced as part of 1997 amendments to the EP&A Act, giving the Minister for Planning authority to approve any projects (including by definition all mine proposals) “considered by the Minister to be of state or regional

environmental planning significance” (Park, 2010: 6). This series of legislative changes marginalised rural landholders in the planning process and perpetuated the exclusion of Aboriginal traditional owners, while enhancing opportunities for capital accumulation by resource extractive companies in a context where mineral exports were playing a larger role in economic growth.

Major amendments were made to the Act by the NSW Labor government in 2005, furthering state government privatisation and deregulation agendas by bringing planning and approval processes for major public and private projects under stronger Ministerial control. From the government’s perspective, Part 3A additions to the Act “streamlined” the environmental assessment process to improve investment prospects. “There is no doubt this bill dramatically improves the climate in which to do business in this state,” stated the minister in the Second Reading of the Speech for the bill (NSW Parliamentary Debates 27/5/2005: 16632, cited in Park, 2010: 8). From the perspective of landowners and other residents affected by coal mine proposals, these amendments limited the influence of public submissions, reduced the scope of government approvals in areas of health, environmental and social impacts that residents deemed critical, and limited the basis for appeals and civil enforcement procedures (Park, 2010: 9; Munro, 2012). In further 2008 amendments, a new decision-making body, the Planning Assessment Commission (PAC), was established to undertake review and determination of major projects when delegated by the Planning Minister under Part 3A of the Act. The PAC process removed the Minister from the onus of direct approval responsibility in many highly conflicted electorates. The newly-elected conservative government, responding to “red tape” and “cronyism” dissatisfaction from major developers across the state, as well as

increasing community opposition to many projects, repealed Part 3A of the Act in 2011. An amended EP&A Act and a new State Environmental Planning Policy (State and Regional Development) 2011 established new planning assessment pathways for State Significant Development (SSD) and State Significant Infrastructure (SSI). These retained the decision-making authority of the Minister or delegate and removed power from local councils and communities, with the intention “to allow for more strategic decision-making” (NSW EDO 2015a). Among landowners opposing mining projects, these changes are widely perceived to be supported by both major political parties, further skewing planning outcomes towards mining approvals. Tim Duddy, one of the leaders of the farmers’ campaign against the mining in the Liverpool Plains, NSW, commented:

The legislation in this area is totally inadequate to deal with the coal and gas rush in this nation. Farmers in the Liverpool Plains engaged in the process as set out by the Acts, but the process failed to protect our property and water rights and interrupted our ability to work our own land. We then went to NSW Supreme Court and won, only to have the NSW Labor government of the time retrospectively change the laws, with the full support of the opposition (Duddy, 2011).

In 2012 the conservative government, under electoral pressure from intense protests over CSG and coal mine development in many parts of the state, initiated a Strategic Land Use Policy to develop Strategic Regional Land Use Plans by mapping two categories of strategic agricultural land and developing policy responses. These included an Aquifer Interference Policy and “exclusion zones” for CSG and mining

as well as extending “an extra level of scrutiny” by means of a “Gateway process” for SSDs on strategic agricultural land. The Mining SEPP was amended in 2013 to reflect some of these aspirations and more than two million hectares of strategic agricultural land was mapped in the Upper Hunter and North West (NSW Govt, 2013).

Spokespersons for the CSG and coal industries as well as farmers’ organisations criticised the policy, the former because it may “scare off” investors, and the latter because it “lacked transparency and toughness” or any force of law in protecting agricultural land (Fuller and Ingall, 2012). The policy now seems to be in suspended animation. No further land has been identified, and the Strategic Agricultural Land Use Plans for Upper Hunter and North West have not had any impact on coal mine developments, although the two “critical industry clusters”, equine and viticulture, in the Upper Hunter, have been declared as CSG exclusion zones (NSW Govt, 2013).

The legislative framework and policy initiatives outlined above do not come under the rubric of “energy policy”, despite coal comprising over 95 per cent of minerals mined in NSW. It is the state’s largest export, earning \$14.4 billion in 2014-15 (NSW Department of Industry, Resources and Energy 2016) and contributes almost all royalties and other revenue from mining to government. More than 75 per cent of the state’s energy comes from coal-fired power facilities (previously government owned but now largely privatised) (Campbell, 2014). The majority of coal produced in NSW is used for energy generation, and the state contributes almost 40 per cent of Australia’s coal exports, mostly thermal coal (BREE, 2014: 77). Despite their status as State Significant Developments, coal mine proposals and coal-fired power stations in NSW, along with coal seam gas (CSG) mining and hydraulic fracturing (“fracking”), are continually challenged by direct action protests, divestment

campaigns, electoral opposition and legal appeals (Connor et al., 2009; Burgmann and Baer, 2012; Rosewarne et al., 2014; Sherval and Hardiman, 2014; Morton, 2015a). Recent election results have shown that coal and gas project proposals as well as electricity privatisation are a critical issue for voters in some electorates (Cormack 2015). The concluding chapter of the *Energy White Paper* identifies “anti-development activism” as a “continuing challenge for resources development” (2015: 45), and suggests that the “social licence to operate is an increasingly significant issue as regulators respond to public concern in ways that reflect public disquiet rather than taking an objective science-based approach” (2015: 50). This formulation seems to assume that local ecological knowledge and citizen science is never “objective” when pitted against corporate and state-sponsored science. Such differences over the status of scientific knowledge have been documented in analyses of resource development conflicts in Australia (Trigger, 1997; Connor et al., 2008; de Rijke, 2012; Tuckwell, 2012).

Conflicts over coal projects exert a capillary action on the flow of power among companies, the state, and landowners. Almost all mining applications are approved under the NSW EP&A Act. At best, mine opponents can hope to achieve more restrictive conditions of consent for operations, reducing loss of environmental and economic amenity. Sometimes they cause substantial delays, putting significant pressure on companies’ bottom line in the current climate of falling coal prices. The personal cost can be high. One resident of Camberwell, an Upper Hunter community engaged in battles over many years with Yancoal’s Ashton mine, commented: “I have seen how they address their consent conditions and I don’t trust them. The mine treats us with contempt. They have ruined our whole life” (Newcastle Herald, 2005: 5).

Court rulings may achieve incremental changes to legislation favouring landholders' rights. But more often, successful legal challenges by mine opponents trigger swift retaliatory changes to legislation by the government, whichever major party is in power. Merits based appeals against PAC determinations were replaced by weaker judicial review provisions in the 2008 amendments to the EP&A Act. At this point in the coal boom, applications for new and extended mines were proliferating, and the number of merit-based appeals mushroomed. Traditional owners, landholders, and residents' groups as well as the NSW Environmental Defenders Office (EDO) became more highly skilled in mounting challenges. In 2016, the NSW government passed laws that greatly increased fines and gaol terms for coal and CSG protestors (de Kretser 2016). A similar attempt to limit the appeal rights of third party objectors under the EPBC Act has occurred at the federal level after persistent complaints by the CEOs of coal and energy corporations like Shenhua and Adani Group (the Indian developer of the Carmichael mega-mine in the Galilee Basin, Queensland – see Rosewarne, this issue) as well as mining peak bodies in Australia. CEOs argue that legal challenges by “environment activist groups” are “derailing” their mine projects (Chan, 2015; Cox, 2015).

Methods and Approach

Since 2008, the author has carried out ethnographic research on climate change, resource extractive development and coal-affected communities in NSW, focusing on the Hunter Valley, a region of over 600,000 people located in the catchment of the Hunter River north of Sydney, and the Northwest, a productive agricultural region

with a population of approximately 80,000 (ABS, 2012). There are several geographical foci of the research, two of which I discuss in this paper: the Upper Hunter districts (with about 50,000 residents) where more than 40 mines operate in close proximity to villages, small towns and farms; and the neighbouring Liverpool Plains district (population about 8,000) in the Northwest. The Liverpool Plains is a previously unmined locality where two large greenfield mines, by a Chinese state-owned enterprise (SOE) and BHP Billiton respectively, are proposed.

The research draws on anthropological fieldwork methods of participant observation. A key aim is to investigate how the material exposure to coal mining and ethical commitments of affected residents shape the contests over coal, both locally and in wider political arenas, and how these contests relate to citizen concerns about energy futures and climate change. The ethnographic approach based on participant observation facilitates a deeply contextualised understanding of the multi-sited regional situations as they change over time, providing insights into the diverse cultural meanings of environmental change and industrial development that are often obscured in more structured and less interactive methods like social surveys. The author has engaged in direct, multiple and long-term interactions with persons and groups who are connected by virtue of common interests, predicaments or conflicts focused on mining developments in the selected localities. Residence in the Hunter Valley has facilitated regular contact with study participants and attendance at key events.

This approach draws on a range of research techniques:

- formal and informal interviews with members of relevant groups and

- organisations;
- observation of meetings and public events, with participation where appropriate;
 - visits to farms, suburbs, town centres, mines and infrastructure sites and other affected areas;
 - content analysis of relevant reports, policy documents, and a variety of media sources.

Results and Discussion

In NSW, rich Permian era coal deposits in the Sydney and Gunnedah Basins are found underneath some of Australia's biggest coastal cities as well as in long-settled agricultural areas. Most of the old underground coal mines near cities, some dating back to the early nineteenth century, are no longer productive. New more invasive open cut extraction methods are established in rural hinterlands with fertile soils and relatively dense populations living on farms, horse studs, vineyards, and in regional towns and villages. The Upper Hunter has hosted coal mines since the early nineteenth century. Nowadays the majority of mines are open cut and operate on the floor of the Upper Hunter River valley, where 64 per cent of land is allocated to mining exploration leases (ELs). The pits, final voids, and overburden dumps of mines occupy a further 16 per cent of land (McManus and Connor 2013). Two of the state's coal-fired power stations operate here, supplying almost half of NSW's 11,000 megawatts of electricity from coal, and about one quarter of total electricity (NSW Department of Industry, Resources and Energy, 2015a). Rural industries are also concentrated in the Upper Hunter, which is home to the world's second largest

thoroughbred breeding industry as well as long established wine growing enterprises, dairy and beef cattle, sheep and lambs, and mixed farming (McManus and Connor, 2013). In the Liverpool Plains of Northwest NSW, the landscape is dominated by cropping agriculture (including canola, sorghum, cotton, corn, barley, wheat, legumes) on properties that are often thousands of hectares. The rich basaltic soils, underground water flows and benign microclimate have provided livelihoods to multigenerational farming families, many going back to early colonial days. No mines have ever been constructed here, and landholders expected that none would ever be permitted to compete with the area's highly productive agriculture, much of it irrigated from a huge and complex system of underground aquifers.

The first people of these lands – the Wanaruah in Upper Hunter and the Gomeroi (also known as Kamilaroi) in the Liverpool Plains – still reside here on designated Aboriginal lands or in townships and small settlements, and retain their relationship to the land and sacred sites as traditional owners. In NSW, Aboriginal people are organised into 120 Local Area Land Councils (LALCs) under the auspices of the peak body, NSW Aboriginal Land Council, whose mission is to “protect the interests and further the aspirations of its members and the broader Aboriginal community” (NSWALC 2009). Several LALCs are located in the mining affected areas of the Liverpool Plains and Upper Hunter, and members are active voices in the debates around mine developments.

It is important to note that most areas affected by coal mining are also facing the prospect of coal seam gas (CSG) extraction, with consequent concern amongst local residents over health hazards and water source damage from hydraulic fracturing extraction techniques (Sherval and Hardiman, 2014; Everingham et al., 2015). In the

drought-prone ecosystems of Australia's temperate zone where most farming occurs, complex systems of underground aquifers are vital to rural productivity in many areas.

Coal mining and CSG extraction present significant threats to these water sources, through cracking and contamination of river and aquifer beds as well as saline and chemical discharge and leakage into both underground and surface water. Most of NSW is covered by overlapping mining and CSG exploration licences. Until July 2015, when the state government, responding to electoral pressure, cancelled some CSG exploration licences, almost the entire Hunter Valley had been held under licences allocated to AGL Upstream Investments Pty Ltd, while the lucrative Liverpool Plains and other Northwest exploration licences are still held by oil and gas company Santos (NSW Department of Industry, Resources and Energy, 2015b).

Competition for underground and surface water is regulated by statutory authorities although in the mid 1980s mismanagement and over-allocation of licences required some Liverpool Plains farmers to voluntarily undertake uncompensated cuts of 35 per cent to their water allocations to protect supply. This was followed by further crippling cuts of more than 30 per cent in the 1990s under a government Water Sharing Plan, and further cuts without compensation in 2000 consequent on the introduction of the Water Management Act. In presenting an account of the "water war" to the Planning Assessment Commission Hearing for the Shenhua Watermark Coal Project in 2014, one prominent Liverpool Plains irrigation farmer concluded:

The irrigation farmers have taken a huge financial hit, however the resource is sustainable for future generations. That's the way our farmers view this asset.

I hope the commission will understand we are now under threat again by a new player COAL (Pursehouse, 2014).

The research placed a high priority on investigating perceptions of environmental change among landowners and Aboriginal traditional owners as the processes of coal extraction occur and as new mining and CSG proposals impinge on future plans for rural production. In these NSW communities, locals identify strongly with the places they and their forbears have inhabited and gained livelihoods from for generations. Farmers see themselves as stewards of responsible land and water management. In the Liverpool Plains, official submissions from farmers opposing coal mine developments highlight the rare and precious resource that they have cultivated and protected over many generations:

The black soils of the Liverpool Plains, the Mooki River, towns from Mount Parry to Boggabri, and in between such as Quirindi, Carroona, Breeza, Werris Creek, Curlewis and Gunnedah, they all provide a pastoral sense of belonging for the many communities and families, doing what they know best, in a unique environment that has enabled prosperous farming and grazing plans to be shaped and developed. It is an area that provides sustainable farming opportunities for some 2,500 farming families and businesses many of whom have histories of this land like mine (Clift, 2014).

Aboriginal people have connections to their country through thousands of years of hunting and gathering. Since the colonial dispossession of people from their lands,

Dreaming stories of Creation Ancestors continue to spiritually connect people and places. Aboriginal scholars from the Upper Hunter have summarised the creation myths of the region that define the bonds of different groups to ancestral places:

Prior to the creation period the Hunter Valley like the continent at large was a vast empty flat plain devoid of any living thing. The creation ancestors rose up from their slumber beneath the plain to invoke the creation period. In doing so they left their indelible imprint – mountains, rivers, lakes, rocks, flora, fauna and man/woman. Every geographical feature and living thing on the land bore the mark of the Creative Ancestors (Blyton et al., 2004: 13).

In the North West, Gomeri astronomical knowledge incorporates the creation story of the Emu in the Sky, “a long, stretched out figure in the dust clouds of the Milky Way from the Coal Sack to beyond Scorpius”. The Emu, once an earth-dwelling Creative Ancestor, changes its appearance as the Milky Way changes position in the night sky and these changes guided hunting and gathering practices of different groups, management of water resources, and initiation ceremonies (Fuller et al., 2013).

In the latest resources boom that started around 2003, fossil fuel corporations have intensified the cycle of resource extractive practices that threaten Aboriginal sites and agricultural communities, through destruction of land forms and soil structure, damage to water sources, air pollution, biodiversity loss, vibration and noise, and intrusive infrastructure (Munro, 2012; Barrowclough, 2013; Everingham et al., 2015; Connor, 2016: 98-140). As the resources boom has subsided, coal prices have

declined to about 43 per cent of their 2011 peak (McHugh, 2015), and companies have embarked on a cycle of cost-cutting and increased production to maintain profits with slimmer margins. This has further impacted traditional owners, rural producers and residents faced with a plethora of mine extension applications (often with the aim of leveraging a sale of low return assets) and intensified production.

Coal industry peak bodies like the NSW Minerals Council assert that mining and agriculture can co-exist, and that mining is “a temporary use of land” (NSW Mining, 2013). Their publicity is scripted around phrases like “co-existence”, “sustainable mining”, “clean coal”, and “mines and vines working together” (McManus and Connor, 2013). These scripts gloss over the sharply different land uses, forms of employment and ways of life of intensive coal extraction and agriculture. Agriculture requires long term maintenance of the productivity of the land and integrity of water sources, while open cut coal mining involves irreparable damage to landforms and soil fertility as well as incalculable risks to water supply. Conflicts occur in a context of legislation and planning policies favourable to the coal industry, government reliance on exports and the expectation of higher revenue from expanding mining operations, regional residents’ concerns about employment generation if mining were to decline, and local government efforts to revive stagnating towns – all pitted against Aboriginal peoples’ struggle to maintain connections to country and rural landowners’ concerns about the impact of coal mining on agricultural activities that have defined settler identity and livelihoods in the region.

The Upper Hunter and Liverpool Plains present different stages of economic and ecological change. In the Upper Hunter, local residents term the open cut mine

workings the “lunar landscape” – cratered, dusty and bare (Irvine, 2010; Barrowclough, 2013; Goldie and Betts, 2014). The relatively high paid coal industry labour force that has benefitted from the boom does not all live locally, many workers preferring to commute from more populous towns in the Lower Hunter. Economic prosperity is apparent in the regional towns that are the hubs of mining areas, but even at the height of the boom the benefits were mixed. Local councils, community groups and charities receive well-publicised mining company donations and contributions under the provisions of the EP&A Act, while short-stay accommodation, fast food outlets and pubs prosper from drive-in-drive-out workers. Single short stay workers do not necessarily benefit other businesses, and there is considerable town-dweller concern about negative social impacts of temporary male workers on the social fabric of towns. Mining workers’ temporary accommodation such as the “MAC villages” that are planned for regional towns create controversy because the fly-in-fly-out or drive-in-drive-out workers rarely spend their money in town, camp caterers often seek supplies interstate, and sexual harassment of local women becomes a problem. Despite the claims of accommodation companies that these facilities alleviate housing stress in regional towns, unions and local councils advocate for a stable workforce permanently located in town (Hasham 2012). Local councils, while generally welcoming new mining projects as a means of economic growth, often bear the brunt of damage to inadequate infrastructure, particularly from heavy equipment on roads whose upgrade and maintenance were not part of agreements with mines at the planning stage. The cyclical nature of the coal industry is evident in the current downturn in coal prices, layoffs of thousands of workers, and mines going into care and maintenance mode. Town populations shrink and businesses decline as a result. Since 2013, at least four thousand mine production workers have lost their jobs in

NSW, most of these in the Upper Hunter (Lannin, 2014). While coal industry analysts report global oversupply and a structural decline in the industry (Morison, 2015; Quiggin, 2015), government and corporate interests remain optimistic about a “cyclical upswing”, staking their hopes on acceleration of coal imports by Asian nations (Galilee, 2015).

Landowners in the path of coal mine developments refer to their places as “sacrifice zones” (McCarthy, 2005; Duddy, 2011; Cottle, 2013). Dozens of villages and many thousand hectares of productive rural properties – vineyards, horsebreeding establishments, farms and grazing land – have disappeared into mining voids since the advent of open cut mines in the Upper Hunter in the 1970s (Kelly, 2013). Residents of the villages of Bulga, Camberwell, Jerrys Plains, Bylong, and Wollar are engaged in protracted conflicts with multinational corporations over mine extensions that in some cases come to within five hundred metres of houses. These have typically been local conflicts over land use and development, pursued by community or rural industry based associations. The small Bulga-Milbrodale Progress Association was lauded as the David that successfully defeated the Rio Tinto Goliath in the conflict over the Warkworth – Mt Thorley mine extension (a battle residents ultimately lost, see below). The Hunter Thoroughbred Breeders Association has mounted a concerted public campaign against the extension of Anglo American’s Drayton South mine, due to fears for the future of their industry. In November 2015 the Planning Assessment Commission rejected the extension proposal for the third time, a rare defeat for a coal project application (ABC News, 2015a).

Liverpool Plains landowners have yet to experience living with coal mines, but the slogan of “wrong mine, wrong place” echoes strongly there. Since 2008, farmers have led opposition to Shenhua Watermark Corporation’s open cut mine proposal located on a slightly elevated area of land near the village of Breeza in the heart of the fertile black soil region (CCAG; Liverpool Plains Alliance). This is not the first coal exploration licence to be granted in the area, nor was it the farmers’ first campaign against a mining company. In 2006, a shelf company of BHP Billiton purchased an exploration licence covering 344 square kilometres in the neighbouring district of Caroonna, with the intention of opening an underground mine using longwall technology (BHP Billiton, 2015). Alarmed about the risk of damage to underground aquifers on which their agricultural production depends, farmers organised the Caroonna Coal Action Group (CCAG) and a women’s awareness raising group, SOS Liverpool Plains (CCAG, 2015). Unresolved conflicts with BHP over access to land for exploration activities led the affected landholders to organise a 24x7 blockade of the lease area covering their properties. This blockade continued for almost two years between July 2008 and March 2010, until CCAG won their case in the NSW Supreme Court, affirming their right to negotiate access agreements with the company and invalidating previous contested agreements (ABC Rural, 2010).

Like the thoroughbred horse breeders in the Hunter Valley, the Liverpool Plains farmers have mostly run their own campaigns against the mine projects without the assistance of other organisations or groups, although the protracted struggle to block the Shenhua mine has somewhat reshaped these tactics. Landowners engage in place-based politics around agrarian issues, and generally eschew the forms of political mobilisation and direct action politics that animate urban-based organisations like

350.org or Greenpeace. They traditionally looked (and many still do) to the National Party with its broad base of rural voters, as well as farmers' associations and rural industry peak bodies like Cotton Australia and the Irrigators Council. During the Shenhua application process, farmers raised funds and drew on their private economic resources to sponsor publicity and technical reports from independent experts to counter company evidence. They also mobilised their substantial political influence in the state and federal Liberal National Party (LNP) conservative coalition parties and among sympathetic independent members of parliament. The federal LNP won the September 2013 election, but the strong bipartisan support for coal exports and the sensitive politics with China, the country's largest trade partner and the world's biggest consumer of fossil fuels, prevailed.

Shenhua Watermark is an Australian subsidiary of the SOE China Shenhua Energy Company, the largest coal and electricity producer in China, with an integrated infrastructure network of rail and port facilities (Shenhua Watermark, 2015). At the height of the global coal boom in 2008, Shenhua Group expanded into overseas investments, with large mine projects in Mongolia and Australia. The Liverpool Plains Watermark site is the first Australian development the company has undertaken. Shenhua was granted an exploration licence at the unprecedented fee of \$300 million (Besser and Nicholls, 2013). While BHP's Carooona Coal Project has not yet submitted an Environmental Impact Statement (the first major milestone in the Mining SEPP), the more rapidly progressing Shenhua Watermark Project has been the focus of opposition since the lodging of the company's EIS in February 2013. The Shenhua Watermark project plans to mine 270 million tonnes of coal over 30 years and soon after obtaining the lease the company began to purchase farming properties

in the mining zone at inflated prices. Many multi-generational farmers preferred to fight the development rather than relinquish land that is regarded by many as the most fertile in the country, but the sales were divisive. Criticisms of the mine from landholders and experts the landholders contracted, recorded in public submissions on the EIS and subsequently at the PAC review and determination hearings (in June 2014 and December 2014 respectively) focused on irreversible damage to underground water sources and the long-term agricultural productivity of the region. The farmers' campaign gained wide media attention, with popular support for the protection of the Liverpool Plains as a "food bowl" for the nation. Gomeroi opponents highlighted non-compliant Aboriginal heritage survey work undertaken by the company, and the inevitable destruction of massive grinding stones resting in moist spring-fed soils that the company planned to relocate. Many other opponents, in PAC presentations ranging from the heartfelt to the technical, raised issues of Aboriginal heritage, biodiversity loss, property values, koala and other wildlife habitat, noise, dust, and community disintegration. Representatives of state- and nationally-based not-for-profit environmental organisations and Greens politicians focused on the permanent environmental damage and climate change risks from the mine. The company emphasised its environmental safeguards, the minimal risks, and the jobs it would bring: "...425 new jobs at start-up, ramping up to 600 when we hit full production", stated project CEO Paul Jackson (Morton, 2015a). Proponents, including town business people, mining industry contractors and mine workers, councillors and not-for-profit organisations focused on the importance of the mine for employment, economic growth, community donations and future prosperity in the region.

The PAC approved the mine development in January 2015, but final approval rested with the federal Minister for Environment, under provisions of the Environment Protection and Biodiversity Conservation Act (1999) (EPBC Act). Lobbying of politicians by farmers resulted in the minister commissioning an extensive scientific review of the modelling of the mine's impact on the primary underground aquifer system in the region, undertaken by an Independent Expert Scientific Committee (IESC) constituted under the EPBC Act. The committee provided an ambivalent report, recommending approval if strict environmental controls were put in place and the company submitted detailed management plans in advance of construction (IESC 2015). The Minister gave conditional support with what he claimed were "18 of the strictest conditions in Australian history which fully incorporate all advice" from the IESC. Farmers called it "agricultural genocide" and vowed to fight on (Hannam, 2015).

"Fighting on" after the formal approval of a coal mine usually means launching legal challenges in various jurisdictions against coal companies and the NSW government, which sometimes join forces against residents' groups. For example, in 2013, the Bulga Milbrodale Progress Association in the Hunter Valley initiated and won their appeals against the approval of the Rio Tinto Mt Thorley Warkworth mine extension in the NSW Land and Environment Court on the basis that the failure to preserve previously agreed woodland offsets would destroy the environmental amenity and habitability of the town (Rigney and Cubby, 2013). Rio Tinto, joined by the NSW Planning Minister, lost its appeal against the decision in the NSW Supreme Court (Hannam, 2014). Rio Tinto then lodged a new application for the mine extension that was approved by the PAC in November 2015. In the company's favour, the Minister

lifted previously agreed restrictions on mining a woodland buffer zone between the village and the mine (Winestock, 2015). One resident exclaimed, “This will destroy the village of Bulga” while the mine’s general manager hailed it as “positive news” for the workforce, “who can get on with managing their lives” (ABC News, 2015b).

Until recently, mining affected landowners have not joined forces with climate change activists contesting the terms of Australia’s energy future. Environmental organisations that specifically address residents’ and rural producers’ local concerns have however had some success in garnering rural support. Lock the Gate Alliance describes itself as “a national coalition of people from across Australia uniting to protect our common heritage – our land, water and communities – from unsafe mining” (Lock the Gate Alliance, 2015). When climate action organisations like 350.org and Front Line Action on Coal (FLAC) joined Maules Creek Community Action Group in the fight to stop Whitehaven Coal’s Maules Creek mine development on the perimeter of the Liverpool Plains in Northwest NSW, the most prominent issue of contention was the “Battle for Leard State Forest”, a unique biodiverse woodland ecosystem, much of which was to be destroyed by the mine. “We are passionate about the cause and will do everything in our power to protect the State Forest” said one of the FLAC protestors engaged in the blockade of the site (Lorimer 2012).

In general though, landowners first attempt to defend their localities and livelihoods through the regulatory and legal instruments available – submissions on EISs, PAC submissions and public hearings, and legal challenges through the NSW court system. Some groups have relied on the NSW Environmental Defenders Office, a community

legal centre that “help[s] people who want to protect the environment through law” (NSW EDO, 2015b).

In 2015, Liverpool Plains landowners opposing the Shenhua mine joined forces with environmental and climate groups to form the Liverpool Plains Alliance, “a coalition of organisations and individuals working together to protect the Liverpool Plains from coal mining” (Liverpool Plains Alliance, 2015). One farmer expressed the rationale for the tactical shift:

Many of us, including myself, think we’ve had credibility because we’ve had the fight with governments and bureaucrats among ourselves, but now the fight has got big, and it’s going to get bigger. It’s become a national issue (Morton 2015b).

Risks of these alliances to landholders’ mission (maintaining control over agricultural resources) and credibility are hedged with carefully worded protocols about the terms of the campaign. The farmer continued:

◀ This campaign is purely focused on coal mining in the Liverpool Plains – it’s not about all mining. And if there is any protesting, it will be farmers that will lead the advance (Morton 2015b).

The terms of these activist/landowner engagements can be uneasy. While actions against mining are strident, climate change activism is conspicuously absent from most landowner politics. Local residents do not want to be identified with “Greenie”

activists, some of whom they perceive to be political radicals, but at critical junctures welcome their additional tactical support especially from Greens Party members of parliament. Activists themselves are aware that climate change and energy politics are not core issues for rural dwellers fighting mine developments. Consequently they highlight issues of shared concern: land use, water, biodiversity, and food security (Lorimer 2012; Pearse, 2015).

Conclusions and Policy Implications

The spread of coal mine developments in the NSW countryside underpins government aspirations to become a “global energy superpower” as outlined in the *Energy White Paper* (McGowan and Kelly, 2015). For rural landowners, the terms of the contest have centred not on energy policy but on a politics of place, water and land use; around the impacts of large scale coal extraction: the spectres of water shortage, irreparable environmental damage to productive land, loss of biodiversity, stranded assets on the fringes of mine developments, depopulation of communities, and loss of viable rural industries. Rural residents who face the encroachment of mining on their productive lands and long-established communities will often say they are not against mining *per se*. Rather, they have a visceral awareness of the local impacts of mine developments. In the Upper Hunter, the change is all around, and surviving communities like Bulga and Camberwell are holdouts. In the Liverpool Plains, the polluted rivers, pockmarked landscape and toxic water-filled “final voids” of the Hunter Valley are the spectres that haunt their imagined futures (Duddy, 2011). The conflicts that have ensued have been about land use, the protection of rural production, and for the Gomeroi people, their ancient heritage.

Government in Australia envisages no brakes on the drive to become a “global energy superpower”, the world’s premier exporter of fossil fuels to energy hungry economies. Legislative frameworks around planning, land use, heritage and environment have moved in synchrony with this agenda, at the expense of traditional owners’ and landowners’ rights, and environmental protection provisions, which have been progressively weakened. Rural producers in the coal rich regions of NSW bear the brunt of current government policies on energy exports and on domestic supply. Capital accumulation through fossil fuel extraction is a form of ecological transformation whereby mineral resources exploited in the rural periphery create value for transnational corporations, but destroy value elsewhere – in the production of greenhouse gases for a warming planet and in the destruction of rural productivity, livelihoods and ecologies. This is an example of the generic “dialectical antagonism” of capital and ecology, whereby capital degrades “the socio-ecological relations and conditions” that make vigorous accumulation possible and ultimately destroys the conditions of social life altogether (Moore, 2011: 12). As McManus has discussed, the “patchwork economy” [of competitive relations between coal and other industries in regional areas] “places no emphasis on sustainability” (2014: 270). In rural NSW, coal mining removes value from the countryside, replaced by disorganisation and decline in rural production, environment and many other dimensions of life. These conditions can be seen as an early harbinger of the disorder from accelerated climate change brought on by fossil fuel profligacy that is afflicting these communities. The reform of mining law, environmental protection legislation and planning regulations should be an integral part of the nation’s climate action policies. Changes to the relevant NSW legislation to ensure long-term security of natural resources, rural livelihoods, environment and heritage should include the reinstatement of merit-based

appeals against State Significant Development approvals under the EP&A Act, as well as legal recognition of the right of landowners and traditional owners to reject coal and gas exploration on their lands. Despite the extensive legislation favouring coal mine developments under the Mining SEPP, the state government Environmental Planning Instruments can prohibit certain types of development including coal mining in designated areas (and has done so in a few cases, see NSW Govt 2007, Clause 9 and Schedule 1). Amendments to the Mining SEPP would allow the government to declare certain areas “off limits” to coal mining, and this action is urgently required for strategic agricultural lands in the Liverpool Plains, Upper Hunter and other regions of NSW.

The UN’s 2015 Conference of Parties (COP21), with its goal “to achieve a legally binding and universal agreement on climate, with the aim of keeping global warming below 2°C” (UNFCCC, 2015) has implications for the energy policies of all countries, not least the major coal exporters like Australia. However there is no mention of fossil fuels in the Paris Agreement and its terms are unlikely to stop or even reduce Australia’s fossil fuel intensive energy and trade policies. The Agreement continues the tradition of previous international protocols that aim to regulate carbon at “the end of the pipe”. This gives participating states the licence to continue their support for coal mining proposals, entrenching privatised coal-fired electricity generation and coal exports. The current declining market conditions for coal will lead to reductions in Australian exports in the short term but market forces (which are also driven by state development objectives) alone will not deliver deep structural transition away from coal. This paper has presented an analysis of coal mining developments in rural NSW that highlights the challenge for Australia and other coal

dependent states: to politically translate the vague terms of the Paris Agreement into a full energy transition away from fossil fuels. The focused reform of energy commodities, particularly law and regulation governing coal mining, exploration, production and trade, is an urgent undertaking to achieve social justice and a sustainable future for traditional owners, for rural communities and producers, for those that consume their food and fibre, and for a warming planet.

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