



Welsh Economy Research Unit Yr Uned Ymchwil i Economi Cymru Calvin Jones

Cardiff Business School

March 2024

jonesc24@cf.ac.uk

Please cite as:

Jones, C. (2024) *Steeltown's End? The Closure of the Port Talbot Blast Furnaces* Cardiff University, <u>https://orca.cardiff.ac.uk</u>



Welsh Economy Research Unit

Yr Uned Ymchwil i Economi Cymru

Cover photograph © Peter Benton

CONTENT

<u>1</u>	INTRODUCTION & OVERVIEW	3
1.1	INTRODUCTION	3
1.2	REPORT OVERVIEW & STRUCTURE	3
<u>2</u>	THE ECONOMIC IMPACT METHODOLOGY	5
2.1	THE INPUT-OUTPUT APPROACH	5
2.2	OUR DATA, INTELLIGENCE & ASSUMPTIONS	6
<u>3</u>	THE ECONOMIC IMPACT OF TATA CLOSURES ON WALES	9
3.1	ECONOMIC OUTPUT & VALUE ADDED	9
3.2	EMPLOYMENT LOSSES	10
<u>4</u>	PORT TALBOT AND THE STEELWORKS	12
<u>5</u>	STEELTOWN'S END? THE FUTURE(S) FOR PORT TALBOT	15
5.1	THE PROSPECTS FOR FUTURE EMPLOYMENT AND LOCAL DEVELOPMENT	15
5.2	CONCLUSION	20

1 Introduction & Overview

1.1 Introduction

In January 2024 Tata Steel announced the imminent closure of both remaining blast furnaces at its integrated mill in Port Talbot. The Margam Works site has hosted steelmaking since the 1920s, with the current plant becoming fully operational in 1953 under both state and private and state ownership.

Despite a decline in onsite employment from almost 20,000 at its peak to around 4,000 in 2024 (and the closure of its third furnace in 2005), the Works remains at the core of the Port Talbot economy, and its communities and narrative. The steelworks also remains one of the largest single private employment plants in Wales, and one of its top exporters.

The closure of the remaining furnaces, denuding the site of its ability to actually make steel, is thus a considerable local, Welsh and indeed UK-national blow, despite the promises of $\pm 1.,25$ bn of new investment in a lower carbon, arc electric furnace that will make steel from scrap (employing significantly fewer than the current 3,000 or so employees whose jobs are at risk in the current Tata plans.

1.2 Report Overview & Structure

This report estimates the economic impact of these proposed closures and related job losses. We utilise a well-established and bespoke to Wales Input-Output modelling approach to enumerate how direct steel industry job losses (in Port Talbot, but also to a lesser extent at other Welsh plants) have implications for economic output, value added and employment firstly, along supply chains in Wales (the 'indirect' effects), and secondly, as income is lost to the regional economy as reductions in steel and supply chain wages impact household spending (the 'induced' impacts). Added together, the direct, indirect and induced effects provide an overall picture of regional economic losses.

In addition to these modelled regional outcomes, we also make some comment on the more local impacts of the closures, with the Works being by far the largest regional employer, and with steel industry wages well in above local and Welsh averages. The next Section of this report then briefly describes our approach to modelling the regional impacts of the closures. Section Three then presents our Wales-level results. Section four makes some commentary on the local impacts upon Port Talbot and its hinterland. A fifth Section concludes, and looks to the future, with the town facing considerable uncertainty, and at the mercy of investment decisions – in steel, in offshore wind and in its new freeport – made far from home. Note, however, this report only estimates the economic impact of the current round of closures and redundancies, not the counterbalancing effects of any possible future investment.

2 The Economic Impact Methodology

2.1 The Input-Output Approach

Measuring the *direct* economic contribution of a single organisation, company or activity is not, *per se*, a difficult task (especially with access to employment and/or financial metrics. However, there are many issues to consider when estimating the *overall* economic impact. The methodology used here to estimate contribution across the economy – of Wales in our case is *Input-Output* (IO) based.

The IO method accounts for supply chain impacts: as a business creates goods or services (output) it demands *inputs* suppliers, who then must also create output and make demands on their own suppliers. This indirect output, typically spread across places and sectors, is lost if the downstream customer no longer requires inputs. The are further 'induced income' effects, where wages paid to workers in the reference firm and in its suppliers are spent within the wider regional economy, or local. Input-Output (I-O) approaches are usually accompanied by a discussion of these 'multiplier' impacts relating to indirect impacts on employment, income, or output. Such analyses are used to estimate the overall impact of existing activities or sectors, new activity (e.g. a factory opening or big visitor event), and, as here, the 'extraction' of activity from an economy.

All models are wrong, but some are useful¹. In our case, the usefulness of our IO approach is bolstered by several factors.

- It is bespoke to Wales, levering a variety of intelligence to present the best possible picture of intra-regional Welsh business interactions, imports and exports, and sources of final demand for as up-to-date a base-year as possible (here 2019), and using well established techniques and national-statistical concepts
- It is of longstanding use and wide acceptance, having seen application in sectors as diverse as tourism, semiconductors, ICT, advanced manufacturing, energy and ports²
 meaning our results here are widely comparable, including to our last report on Tata Steel in 2012³.

¹ https://en.wikipedia.org/wiki/All_models_are_wrong

² See <u>https://www.cardiff.ac.uk/research/explore/research-units/welsh-economy-research-unit</u> for a flavour. ³

https://www.researchgate.net/publication/321582915 Project Report The Economic Impact of Tata Steel in Wales Verina Pinto and Calvin Jones Welsh Economy Research Unit Cardiff Business School

• It is based on detailed information regarding the scale and scope of affected Tata operations in Wales.

Notwithstanding the IO method itself has a number of limitations. Firstly, it does not account for any displacement effects; for example if (in this case) former Tata employees gain employment elsewhere. Secondly, whilst we can be reasonable sure of how Tata uses labour and other inputs (see following section), further rounds of supply chain impacts (including use of imports to Wales) are assumed to follow the Welsh-average case for the 'basic metals' sector, rather than the suppliers to Tata specifically. in our 2019 base-year, sector also included Celsa in Cardiff, other Tata sites, remaining activity at Liberty Steel in Newport and Tredegar. Whilst in practice these within-sector differences are likely to have a modest impact on aggregate results (Port Talbot being dominant) they should not be forgotten.

Readers should also remember that although furnace closure will have very specific supply chain effects – for example in terms of bespoke components, and maintenance that might be undertaken by subcontractors. Further, demand for coking coal (some of this purchased from the recently re-licensed Aberpergwm mine in Neath) will move to zero. We cannot reflect these specificities in our modelling and here our supply chain estimates relate to a notional reduction in steel activities 'on average'.

Full detail on the 'swings and roundabouts of IO modelling is available in the reference text by Miller and Blair⁴, and also on the Cardiff University Input-Output project⁵. Further specific methodological questions should be directed to the current author.

2.2 Our Data, Intelligence & Assumptions

This desk-based study levers a number of data sources to provide as accurate as possible an estimate of the regional and local impact of Tata's closure decisions. Key sources and frameworks include;

- The Input-Output Tables for Wales, 2019,
- Annual company accounting returns for Tata Steel Europe Limited and Tata Steel UK Limited,

⁴ For a full discussion see Miller, R. E., & Blair, P. D. (2009). *Input-output analysis: foundations and extensions*. Cambridge university press.

⁵ See <u>https://orca.cardiff.ac.uk/id/eprint/151984/1/Project_Report_Input_Output_Tables_Wales_2019.pdf</u>

- The prior report by Pinto & Jones⁶ on the economic impact of Tata Steel in Wales (2012),
- Tata Steel announcements and press reports on the projected 2024 closures
- Further information on the nature of job losses provided by BBC Wales to the research team,
- Contextual Office for National Statistics data on employment, wages and population, for example from the Census 2021, Annual Survey of Hours and Earnings etc.

A variety of policy and press documentation was used for our final discursive section on potential Port Talbot futures.

The first step in our modelling is to formalise the nature of the lost economic activity and job losses – with the best information available as of February 2024. Our framework is as follows:

- The vast majority of job losses 1,930 occur within the Port Talbot works,
- A further 180 jobs are lost at other sites across Wales⁷,
- Further losses occur outside Wales but are not modelled here,
- All involve full-time staff,
- Whilst some (unpublished) detail is available on the nature of roles and locations that are likely to be lost, no information is available on related wages – hence we assume workers at risk are paid the average Tata UK wage⁸.

The employment and related wage losses used as the input to the modelling process are consequently those detailed in Figure 1 below.

Total Monthly Employment Average	7,913
Wages & Salaries	£331m
Social Security Costs	£37m
Total employment cost	£368m
Gross Average Employment Cost	£46,380
Average Income tax, NI & Pension	£15,820
Average disposable income	£30,560
Total income losses	£64.5m

Figure 1 Estimated Direct Wage Losses

Sources: Tata UK Annual Accounts; Input-Output Tables for Wales 2019

⁶ ibid

 ⁷ <u>https://businessbosses.news/tata-steel-faces-major-job-losses-in-port-talbot-raises-concerns-for-local-economy/</u>
 ⁸ As derived from the latest available Annual Accounts. Our estimate of annual gross pay closely matches that reported by ONS for annual mean pay of all employees in the Basic Metals SIC for 2023 (£44,118).

Economic losses can also be considered in terms of output and value added. Drawing inference from Tata accounts and the Input-Output tables suggests that such losses might total £530m in lost output but this is a necessarily an approximate figure based on aggregate employment losses – whereas as the lost 'heavy' furnace activities may contribute proportionally more to Works output. Using a similarly linear approach estimates direct losses in Gross Value Added at £74m⁹.

These estimates of direct economic losses inform our IO multiplier analysis, revealed in the following section.

⁹ These losses are relatively modest compared to output as GVA includes profits on activities – a number which was significantly negative in 2023 for Tata UK, as for most recent years.

3 The Economic Impact of Tata Closures on Wales

3.1 Economic Output & Value Added

The estimated loss of over £500m of lost output at the Port Talbot works results in further losses s in output and value added in supplying firms. We estimate the indirect output losses at £334m¹⁰, leading to an overall loss of £864m in regional output per annum. As Figure 2 shows, a third each of these losses are in the manufacturing and retail, transport & hospitality sectors.

	Output (£m)	%
Direct Tata Losses	-530	-
Indirect & Induced multiplier losses		
Primary	-23	7%
Manufacturing	-103	31%
Utilities & Construction	-59	18%
Retail, Transport & Hospitality	-106	32%
Other Private Services	-38	11%
Public Sector & Other	-5	1%
Total Indirect & Induced	-334	100%
Total	£864	-

Figure 2 Direct & Indirect Losses in Economic Output

These losses are also associated with reductions in Gross Value Added (GVA). We estimate these losses at £142m. These are significantly higher than the onsite GVA loss of £74m, thus summing to a total estimate of lost annual GVA¹¹ at £216m.

¹⁰ An implied multiplier including induced income effects, of 1.63.

¹¹ Albeit based on a 'generic' reduction in steel output, rather than the blast furnace-specific impacts. Note the reduced onsite GVA is resultant in the losses sustained by the works, and steel in Wales more generally.

3.2 Employment Losses

More relevant to wellbeing in Wales are the employment losses associated with the contraction in the scale and scope of steel-working in Wales. We estimate the supply chain and induced-income effects of the Tata closures at 2,820 full-time-equivalent (FTE) jobs. Adding this to the direct job losses of some 2,210 leads to our overall estimate of a little over 5,000 jobs lost to the Welsh economy for every year that the works run at this reduced scale.

Direct Tata Losses, 2,210	Retail, Transport & Hospitality, 1,470	ç	Manufacturing, 480 Other Private Services, 390 Public Sector & Other, 170	Utilitie s & Constr uction, 170
			FTEs	Percent of Indirect
Direct Tata losses			2,210	- Indirect
Indirect & Induced multiplier losses				
Primary	140	5%		
Manufacturing			480	17%
Utilities & Construction			170	6%
Retail, Transport & Hospitality			1,470	52%
Other Private Services			390	14%
Public Sector & Other			170	6%
Total Indirect			2,820	100%
Total			5,030	-

Figure 3 Direct & Indirect Losses in Employment

Note that this analysis suggests that every FTE steel-working job in Wales currently supports just under 1.3 further FTE jobs across the Welsh economy¹². This is due to both the extent of well developed Tata supply chains across Wales, and the well-paid nature of most steel jobs, which drives higher wage-related 'induced income effects'.

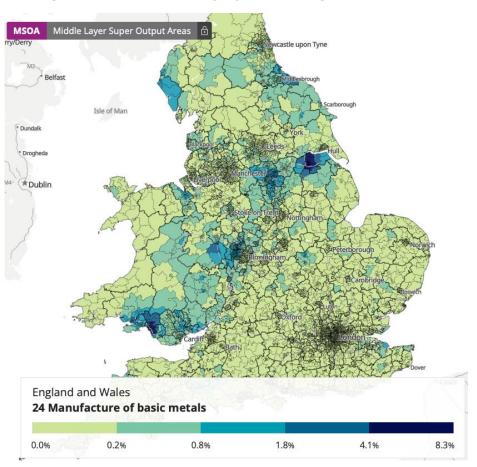
These induced income effects are evident in the large proportion of employment estimated to be lost in retail, transport and hospitality sectors in aggregate – over half of all indirect losses (although this is also a result of the very high level of labour-intensity in these sectors). In total, these losses comprise around 0.4% of the Welsh regional workforce¹³.

¹² Our estimated employment multiplier is 2.27.

¹³ As estimated in the IO Tables for Wales.

4 Port Talbot and the Steelworks

Port Talbot is one of only a handful of remaining clusters of metal manufacturing employment in the UK. In the period since the 2021 Census (as shown in Figure 4), the closures of Scunthorpe's blast furnaces has been announced, and Redcar (Teesside) is entering demolition phase.





Even in 2021, Port Talbot and its hinterland saw the highest concentration of residents involved in steelmaking – the Census found around 6.5% - 8.5% of residents employed in the manufacture of basic metals across the relevant output areas, with percentages barely climbing higher than 2% for any other part of south Wales¹⁴ (Figure 5).

Source: Census 2021

¹⁴ Or indeed at Shotton.

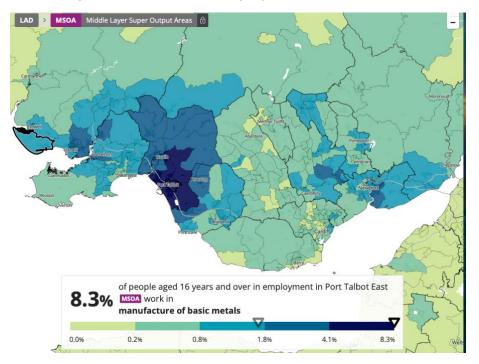


Figure 5 Basic Metals Employment in south Wales

Source: Census 2021

This concentration of resident employment clearly has the potential to affect Port Talbot to an alarming degree. This is especially true given the well-paid nature of the jobs in question – indicated by the Neath Port Talbot Unitary Authority as a whole having the third-highest average wage in Wales¹⁵, driven in large part by the steelworks.

Average wages for the manufacture of basic metals appear some 50% higher than the Welsh all-industry average¹⁶. Switching to analysis at the level of the Aberavon parliamentary constituency¹⁷ suggests that the 1,930 direct job losses comprise around 6.6% of the area's total FTE employment¹⁸. Assuming the remainder of the town's employees are paid at around the Welsh average, this would imply a loss of 10% of the town's gross wage earnings.

¹⁵ Behind Monmouth and Cardiff. See <u>StatsWales</u>.

¹⁶ For 2019 in any case; Input-Output Tables for Wales – please contact author for further detail.

¹⁷ The closest single-administrative-unit corollary for the town.

¹⁸ On a workplace not residence basis; ONS Business Register and Employment Survey, <u>www.nomisweb.co.uk</u>

Our modelling does not allow us to say how many indirect losses occur locally. However, *for illustration*, if half of subcontractor/supply chain and wage-spending impacts arose within Aberavon, paid at Welsh average wages, this would imply a total loss of almost 15% in town gross earnings; perhaps around £200m per annum.

5 Steeltown's End? The Future(s) for Port Talbot

5.1 The Prospects for Future Employment and Local Development

Two distinct narratives have emerged around the closure of Port Talbot's blast furnaces and their putative replacement with an arc-electric furnace.

The first interpretation is that (given Tata UK's longstanding financial losses) this is the only option that will guarantee the continuation of steelmaking in the town, and that this dis-thenre-investment is a key step in a decarbonisation of wider regional industry that is also more 'circular'¹⁹. This narrative is preferred (unsurprisingly) by Tata Steel itself, and the UK Government (investing £500m in the transition).

On the other hand, both unions and the Welsh Government are far more critical, disappointed that any chance of a longer transition is gone, and that investment in alternative novel steelmaking seems to be on the back-burner. Also notable in this reading is that the UK, unique in the G20 more widely loses its ability to make 'virgin' steel of the highest quality and with the widest range of applications²⁰.

Either of these views is defensible, based on different readings of the past and future – and reflecting the different positions of proponents. Both imply a different future. In the first, optimistic, case the construction of an arc-electric furnace ameliorates some of the heavy-steel losses and is a central plank of Port Talbot's future.

Irrespective of its current stated position²¹, Tata Steel will invest in an electrical arc furnace (EAF) only if the investment makes financial sense (in the light of the 40% capital subsidy by UK Government) – with two thirds of Tata Steel owned by external shareholders requiring a return²².

²⁰ https://record.senedd.wales/Plenary/13682#A85021

¹⁹ e.g., <u>https://www.tatasteel.com/media/newsroom/press-releases/india/2023/tata-steel-and-the-uk-government-jointly-agree-on-a-proposal-for-the-largest-investment-in-the-uk-steel-industry-for-decades/</u>

²¹ https://www.itv.com/news/wales/2024-01-19/tata-boss-100-committed-to-building-electric-arc-at-port-talbot

²² As pointed out by Tata Steel CEO T.V. Narendran <u>https://www.youtube.com/watch?v=IDIwK0ukW0Q</u>

This will depend on economic conditions over the lifetime of the plant – steel demand, the efficiency of competitor low-carbon steel approaches²³, and especially electricity prices, with electricity the key input (along with scrap steel) in the steelmaking process. EAF operations will not begin for several years (if not longer) at Port Talbot and the conditions for European steel at the end of the decade are impossible to predict.

Fortuitously we can make a judgement on, at least the *past* financial performance (and economic returns) of an existing EAF in the UK – indeed in Wales – at the CELSA plant in Cardiff Bay (albeit one, at 1.2m tonnes/annum of output less than half the size of Tata's suggested EAF capacity of 3m tonnes per annum at Port Talbot).

CELSA's annual accounts show that since acquisition in 2003, in the plant has been profitable (after tax) in eight of the last twenty years²⁴, albeit showing stronger performance post-COVID (with after-tax profits at around 5% of turnover in 2022). This poor performance is reflective of the European steel industry more generally. For example, production declined by over 20% in the period from 2011-2020²⁵, but this has not been enough to avoid overproduction and chronic economic losses. Capacity utilisation has been running at around 75% since 2010 with McKinsey seeing little prospect of short-term improvement²⁶.

A notable bugbear of steel producers in the EU (and especially in the UK) has been the high costs of energy compared to the rest of the world (and for the UK, compared to the EU). EAFs are notably heavy users of electricity. Estimating from CELSA's accounts²⁷ for example suggests that the almost 1 Gigawatt-hour of electricity required to run the plant in 2022 might have cost over £150m (some 18% of turnover).

Clearly, then the move to an EAF at Port Talbot might serve to *decarbonise* the steelmaking process: arc electric furnaces create around 0.6 tonnes of CO₂ per tonne of steel compared to around 2 tonnes for blast furnace-based integrated mills²⁸. This is, however not the same as making steel at Port Talbot *profitable*. This will require some or all of the following:

• Long-term stronger markets for the output of British steel, domestically or for export,

²⁴ CELSA UK Holdings Ltd; Analysis via Bureau van Dijk's FAME database, https://login.bvdinfo.com/R0/fame
 ²⁵ <a href="https://www.eurofer.eu/assets/publications/brochures-booklets-and-factsheets/european-steel-in-figur

²³ Like direct hydrogen reduction by <u>thyssenkrupp</u>

^{2021/}European-Steel-in-Figures-2021.pdf

²⁶ Albeit this in their <u>2021 report</u>.

 $^{^{\}rm 27}$ And Dept for Net Zero & Energy Security data on industrial electricity prices

https://www.gov.uk/government/statistical-data-sets/prices-of-fuels-purchased-by-manufacturing-industry ²⁸ https://link.springer.com/article/10.1007/s11837-014-1092-y

- Relatedly, competitive conditions that allow EAFs to outcompete both legacy blast furnaces, and alternative novel steel production techniques as demand and regulations change,
- Further related, electricity prices in the UK and, potentially in Wales should regional variations in prices for industrial customers ever become significant – that allow Tata a sufficiently low cost base to make a return at prevailing prices,
- Technological developments that mean the new Tata EAF brings significant cost advantage.

The period from 2020-2024 illustrates the difficulties inherent in forecasting economic conditions in a time of increased volatility. However we make the following observations.

- The long-term demand for steel in Europe will only recover if the traditional continental markets for steel that have declined – for example construction car manufacture, oil and gas, appliances – recover grow significantly. The prospectus, driven by continued manufacturing weakness, macro-economic torpor and political uncertainty is not good²⁹.
- This demand will only be met by European domestic plants if the long-term trend for increased steel imports into Europe³⁰ from cheaper locations can be turned around.
- The competitiveness and hence profitability of UK (wholly EAF) steel plants will depend heavily on the relative cost of electrical power. With the UK requiring very significant investment in Grid and new power generation, and with electricity facing new responsibilities in heating our homes, propelling our cars and driving our industry, the future demand-supply-investment equation does not look encouraging.
- Further, to fully embed its decarbonisation role, the electricity that feeds Tata's EAF must be green. With south Wales having a grid carbon intensity that is consistently amongst the worst in GB³¹, and with renewable installations in Wales at minuscule scale in 2021 and 2022³² the prospects are not good.

²⁹ https://www.eurofer.eu/publications/economic-market-outlook/economic-and-steel-market-outlook-2024-2025first-quarter

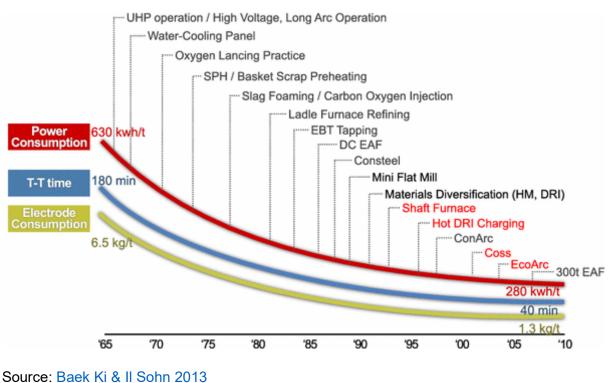
³⁰ <u>https://european-steel.eu/statistics/trade-statistics/imports</u>

³¹ <u>https://www.carbonintensity.org.uk/</u>

³² As indeed they have been since 2015

Turning to Tata specifically, the new EAF might, by dint of its size bring some economies of scale compared to smaller installations. However, whilst savings can be achieved per-unit-kilogram in, for example, buildings and infrastructure and employment³³ other key costs – e.g. electricity – will be linear with output.

Tata may additionally be in possession of proprietary technical knowledge that additionally reduces the costs of EAF steel, but as Figure 6 suggests, this would mean bucking the trend of a very mature technology that has played out efficiency and technology gains over many decades to result in a steelmaking approach that looks to be at the peak of possibly energy (and hence to an extend financial) efficiency.





³³ Tata is suggesting that output can be 2.5 times that of CELSA with only c. 20% more staff.

There is of course a more positive reading of the profitability of the planned EAG at Port Talbot. A number of putative investments could alter the picture significantly. Key in this is the leasing of Crown Estate seabed for 16.5GW of floating wind generation³⁴. This is more than a potential source of green electricity. Related plans have seen the Celtic Freeport³⁵ shortlisted for approval by UK Government, whereby Port Talbot and Milford Haven would provide manufacturing and maintenance for the windfarms, whilst delivering net-zero Megawatts.

The issue here is one of timing. National Grid has included preparation for an indicative 1GW Celtic supply in its pathways to 2030 document³⁶, at the Crown Estate envisions 4GH of capacity operational in 2035. There is thus a decade gap between the closure of the blast furnaces in 2024 and the prospect of surplus significant renewable power available along the south Wales seaboard³⁷.

The ability to somehow bridge this gap – both inside Tata Steel and in Port Talbot – will be key. Here the prospect of profitability of the EAF over the much longer term – the decades *after* the 2030s, when green electricity should become more readily available – will be the motivation for Tata to invest. Tata, of course is fully aware of this temporal gap. Notably, it should be remembered that although largely shareholder-owned, Tata is not hedge- or investment-fund controlled and not motivated by short-term profit generation but focussed on long term outcomes (hence its continued presence in the UK, not just in steel but via other companies). One might argue that if Wales' key industrial capital has to be owned by a multinational investor, Tata is far from the worst option.

³⁴ https://www.thecrownestate.co.uk/our-business/marine/round-5

³⁵ https://www.celticfreeport.wales/

³⁶ <u>https://www.nationalgrideso.com/future-energy/pathway-2030-holistic-network-design</u>

³⁷ Note that new *low-carbon* power may be available relatively close if Hinkley Point C is opened around its new expected completion date of 2030-ish, but competition for that electricity will likely be high.

5.2 Conclusion

It is impossible *not* to view the job losses at Port Talbot within the context of the wider and long-term hollowing out of manufacturing and primary economic activity – in employment terms as automation and efficiencies reduced required workforces, and then more existentially as entire sectors withered or decamped. In essence, we have been long warned – both in terms of general economic trends, and on Port Talbot specifically³⁸.

The long-expected crisis has resulted in, of course, interest and concern from public agencies over many years, resulting in task forces, statements of intent and some concrete proposals – including, following the loss of 1,000 jobs in 2016 the then-economy minister writing to the then-Chancellor to ask for an enterprise zone that is not conceptually much different to today's suggested freeport³⁹.

The key takeaway from the last decade is that nobody in Wales has *any* significant control over its future. The £500m investment that enables the switch to EAF comes from the UK Government, which has negotiated extensively with Tata Steel over its structure. The decision to invest in new steelmaking capacity comes from Bombay House in Mumbai, delivered by the group CEO (rather than any autonomous plant or regional representative). If Tata had decided to simply close the furnaces and abandon the Work's 'heavy end'⁴⁰ there is probably little or nothing Welsh Government, or the relevant Unions could have done in response.

Port Talbot is however *not* like the Valleys after coal. Although facing significant challenges, there is the realistic prospect of an economic future, and an important role at the heart of an decarbonised south Wales energy and industrial cluster. This, however, might be viewed in hope rather than in expectation. Rather than waiting, as usual, with bated breath for the next announcements on dis- or re-investment from remote owners, the communities, together with local and national politicians, and other private sector players, might consider the importance of the town's other assets – for example the exceptional beach, excellent transport links, attractive hinterland, and strong workforce and community – and what these might offer if brought out from underneath the shadow of the steelworks.

³⁸ Now would be an apposite time for the BBC to again make available Michael Sheen's '<u>The Fight for my Steel</u> <u>Town</u>.'

³⁹ https://www.walesonline.co.uk/business/business-news/port-talbot-could-designated-enterprise-10758071

⁴⁰ https://www.youtube.com/watch?v=IDIwK0ukW0Q 19m40s