EDUCATION AND HEALTH STANDING COMMITTEE

Second Report — Making hope practical: Report of the inquiry into the response of Western Australian schools to climate change — Tabling

MR C.J. TALLENTIRE (Thornlie) [10.21 am]: I rise to present for tabling the second report of the Education and Health Standing Committee titled *Making hope practical: Report of the inquiry into the response of Western Australian schools to climate change*. I also table a copy of the open submissions received by the committee.

[See papers 1234 and 1235.]

Mr C.J. TALLENTIRE: This inquiry looked at how we can ensure that all students in the Western Australian education system can be properly engaged in one of the most pressing issues of our time. The committee inquired widely into how that can be done because that is something that our students deserve.

I will give members a little of the history of this inquiry. We were inspired by the work done in the health portfolio by Dr Tarun Weeramanthri, who was the inquirer who led the report that became known as *Climate health WA inquiry: Final report*, tabled in November 2020. In that report, Dr Weeramanthri set out the science behind climate change. Our committee did not seek to replicate that. The science is well established and well documented elsewhere. Our report goes to the various actions that are necessary in the Western Australian education system. It also goes to much of the great work that is already taking place. We looked at schools in which community members, teaching staff and volunteers were inspirational in the way they led their schools' drive towards sustainability initiatives. I think particularly of Dr Elaine Lewis at Coolbinia Primary School. Yes, she receives some pay—she is on the school's payroll—but she delivers so much more in the hours she spends in contact with students and in the various initiatives she organises and prepares at the school. She is an inspiration to us. We heard from many people like Elaine who we were inspired by.

These inspirational people have undertaken initiatives like retrofitting schools so that they are more energy efficient. They have sought to make schools more climate safe so that classrooms are not as hot or cold as they might otherwise be and are less reliant on mechanical heating and cooling. They have sought to make the schools more energy efficient and waterwise and to make schools better waste managers. These sorts of initiatives are not only desirable and beneficial from an environmental perspective, but also can have a dramatic benefit on a school's bottom line. They can constantly reduce a school's energy and water bills.

One of the committee's findings relates to the need to ensure that schools' corporate services managers are fully conversant of and literate in all the metrics around being waterwise and energy efficient so that they know how to ensure that when they receive a bill, it is not just something that has to be paid but is used as a means to drive down the school's energy bills. With the single-line accounting that goes on in schools, extra cash would be made available for expenditure on other practical things within the school community.

The committee saw a lot of co-benefits. This was a major theme of the inquiry. We saw many benefits to acting on climate change by being more energy efficient, waterwise and waste wise and ensuring that students are given the opportunity and encouragement to go to school under their own steam rather than by private vehicle. As I said, that is a major theme of the report. I still hear people on commercial radio say that this is a contested area. However, they cannot dispute that children being active on their way to school is beneficial and helps deliver enormous physical and emotional health benefits. We have seen research that says that students who are able to get to school under their own steam have additional opportunities to engage with their peers and develop a degree of self-reliance about how to get around the community. They learn to understand how bus timetables work and the road network. Most importantly of all, they develop good road safety skills because they understand the traffic code. These are some of the benefits that come from a student who is able to make his or her own way to school. It is also obvious that physical activity is highly beneficial. Additional physical activity can help people escape what has already been identified by other inquiries as a most disappointing aspect of our education system, which is that as few as 20 per cent of students currently get to school under their own steam. We have to turn that around to what it was about 20 or 25 years ago when the majority of students—about 80 per cent—made their way to school under their own steam. We have to reverse that trend for the betterment of schools and the air quality around them and for road safety reasons because it would reduce the amount of congestion and traffic hazards and what have you. The committee identified all kinds of benefits that come from that single action that can be brought under this broad banner of actions to make schools climate friendly.

Interestingly, at finding 21, the committee noted —

> The Department of Education's limited investment in supporting active transport to school is significantly disproportionate to the value of land sacrificed for parking at schools. A complete opportunity cost analysis may reveal that greater investment in active transport is justified.

That is just one area that the committee highlighted. Recommendation 1 of the report goes to the matter of co-benefits. We highlighted to the Minister for Education and Training that the co-benefits of climate action in schools promoted within the Department of Education's frameworks can have enormous benefits and deliver a whole host of advantages for students. I also note that the people from school corporate services need to understand and be trained on various bills so that they can be the champions who lock in the financial benefits received by a school when it becomes a climate-friendly school.

I move to another aspect of the whole report that was of concern and that is the increasing incidents of climate change anxiety amongst students and young people. We found there is a rise in the number of students who suffer from anxiety. That in itself is a grave concern, but they often nominated that climate change was one of the principle causes of their anxiety. Well-designed school climate action and sustainability programs can be beneficial in what they can practically deliver with measurable reductions of tonnes of CO_2 emissions. They can have a hugely positive impact on the psyche of the school and on individuals to help them feel that there is, as our report title suggests, cause for hope and optimism. They can learn about how to bring about change and be optimistic that change is something that they, even as young people today, can help deliver upon. That is something that they deserve to feel is within their scope and is not beyond them; they are helping shape the future and they can do that now.

We also appreciated through the inquiry just how exciting inquiry-based learning approaches can be. We know academics who focus on various learning methods are always interested in different learning approaches, and inquiry-based learning, whereby students see a problem and then want to delve into the answers, can engage students who are perhaps not so engaged by the traditional standard delivery of education. For all students, it can mean a much deeper engagement with the matter that is at hand before them.

We also saw how multidisciplinary tackling the problem of climate change can be. It is quite striking when we consider the very broad range of aspects that are at the heart of the matter of climate change and its response. Students are learning about international institutions and various conferences of parties and meetings around the world. They are learning about the significance of Paris agreements, the function of a Glasgow meeting, how the United Nations is bringing together countries, and learning about how at a very high institutional level the global community is tackling a global problem. Then, at the other end, if you like, we have students learning very technical details about how many watts of electricity a solar panel can produce and how investment in expanding the solar array at the school might contribute to the school's energy consumption. It really is quite heartening to see how for young people this can have incredible appeal, and that they are able to see how the highest level of institutional international frameworks are helping deliver better outcomes. At the same time, they see very detailed practical applications and learn the physics and mathematics behind many of these technological solutions and things such as the quite complex cost–benefit analysis on the implications of extended use of a solar panel array might be. They then also learn about the shifts in the distribution of electricity across our networks and the role of schools as electricity hubs, distribution points and community batteries, and that schools could be the ideal location for community batteries. I acknowledge the work that the Minister for Education and Training and Minister for Energy have already done, with various trials underway. This is a fabulous opportunity to see the feasibility of various technological solutions. Students have a real thirst for this kind of practical real-life problem-solving and are very keen to embrace it.

This inquiry enabled us to see how much enthusiasm there is in various school communities and the passion with which various school P&Cs and other organisations are seeking to service and provide energy audits at schools. Some of my colleagues will touch on the tremendous work of Environment House in providing energy audits, and the work by Alan Benn, then the work done by groups such as Millennium Kids and its CEO, Catrina Luz Aniere. Some of the students we met who are involved in the Millennium Kids group showed how committed they are to bringing about change and how they are helping their peers understand just what sort of contribution they can make, thereby helping them learn about skills in advocacy. I think it is tremendous that young people are so engaged on this. Something we talked about in the inquiry that is detailed in the report is the fact that during the course of our inquiry, there were a number of school strikes on the front steps of Parliament House. Young people had been involved in organising themselves and their peers to come up to Parliament House, organising things such as putting slogans on signs, working out what their ideal messaging should be, and learning the value of their activity and to whom they are advocating. These are incredibly valuable active learning opportunities that enable a young person to see just how we can bring about change in our community. For people of a young age to be engaged in trying to bring about change is really valuable to them, and it can fill the broader community with a great sense of optimism that the next generation is not shy or scared to delve into complex issues and is happy to be engaged to learn about things and make their voices heard. To do that, using the institutions available to them, they are appreciating the very valuable learning opportunity of being involved in advocacy of any form.

We were a very strong committee and I really thank my deputy chair, Lisa Baker, member for Maylands; Lisa Munday, member for Dawesville; Caitlin Collins, member for Hillarys; and Kevin Michel, member for Pilbara. The diversity of perspectives that each of us brought to the table, the backgrounds and life experiences, really assisted us in the way this report was put together. I also specifically thank for her fabulous work Catie Parsons, our principal research

officer, and I thank our research officers, Rachel Wells and Sylvia Wolf. Their commitment and dedication have been absolutely essential to the success of the inquiry. I commend the report to the house.

MS L.L. BAKER (Maylands) [10.38 am]: I would like to start by congratulating Catie Parsons, Rachel Wells and Sylvia Wolf, our team from the Legislative Assembly Committee Office, and thank them so much for the dedication they showed in helping us to take evidence and get this report together. They are truly a force to be reckoned with. They looked after us very well. To my colleague and the chair of our committee, the member for Thornlie, I thank him for his leadership and for the passion that he brings to this topic. It has been a pleasure to get to know my colleagues the members for Dawesville, Hillarys and Pilbara a bit in this context. I look forward to working with them on future reports.

I would like to focus on a couple of aspects of this report. My colleague the chair mentioned the anxiety that climate change produces in a whole generation of our children. It is a salutary theme to think about in the context of COVID. It is another layer for an already anxious community that we see all over the world, but particularly in Western Australia. One of the solutions for this anxiety was mentioned by Emeritus Professor David Blair from the University of Western Australia, who said to the committee —

> But you can only empower them with understanding. We give the understanding, the understanding gives the empowerment and the empowerment will prevent despair.

That is the central message of this report: that action gives everyone a chance to think that they can contribute to a solution, rather than continuing to contribute to a problem. Many of us in this house would have seen this problem developing over 30 years, with very limited government response, so I am very pleased that we have been able to do this report.

I want to focus on the contribution from my own electorate. A crew that I am very proud of is the Environment House team, which has been a longstanding advocate for climate action in my electorate, and much more broadly. I remember the likes of Alan Benn, who was an energy auditor when I first entered this place, a very long time ago, in 2008. Alan was part of a project called the hardship utility grant scheme, for which the now retired Christian Porter cancelled the funding. The entire program was meant to support the most vulnerable in our community to continue to have power in their houses. Alan was in that program. He lost his job at that point in time and went to work for Environment House. He has continued to do energy audits, most successfully, with schools in my electorate and across Western Australia. He has saved tens of thousands of dollars through going into schools and identifying the problems that contribute to their high cost of energy. I thank Rosemary Lynch, Rachel Roberts and Alex Ellis for presenting evidence to our committee.

I have already mentioned Emeritus Professor David Blair, another particularly significant contributor, from my perspective, but I would like to mention the Einstein-First project, which he also leads. To quote from our report —

> Einstein-First (EF) is a UWA Physics Department education initiative to address the critical decline in teenage student attitudes to Science, Technology, Engineering and Mathematics (STEM). Modular lessons and activities are being created in consultation with a small group of teacher volunteers, consistent with the current science curriculum.
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> The EF initiative introduces modern science concepts (e.g. atoms and molecules, heat, forces and light as photons) from an early age through toys, songs, models and games. From Year 6, students are introduced to the science of climate; evidence, explanation and consequences of global warming; and sustainable energy futures. High school modules cover energy (light, sound and heat); energy transfer, wave and particle models; and global systems, including the carbon cycle, and interactions with the biosphere, hydrosphere and atmosphere.

This is such an impressive innovation, and I am very proud to have heard more about that in the evidence provided by Mr David Wood, Dr Elaine Horne, Dr Jyoti Kaur and Ms Kyla Adams. It was very inspirational listening to the description of the Einstein project and the work it has done.

I go back a very long way with one of the other major contributors to this report, Ms Catrina Aniere and Millennium Kids. I have worked with them for probably over 20 years. They have developed a truly remarkable inquiry process. I am very proud to say that one of the things that Catrina spoke to me about outside of a hearing reinforced one of the findings in our final report—that is, the link between the children she works with and their understanding of the important link between food and health, at all stages of their lives. She also supported some of the findings in this report from the work that she has done with Millennium Kids, in particular that healthy environments support learning and wellbeing, and physical health is very important. Sustainable diets need to be healthy diets in our schools. Our report states —

> Up to 37 per cent of GHG —

That is, greenhouse gas —

> emissions are attributable to the food system, from agriculture and land use, storage, transport, packaging, processing, retail and consumption.

"Food miles" is generally the term used for that cluster of impacts —

> Therefore, the mitigation potential of dietary change is high. Supporting sustainable diets in schools can improve students' overall health and reduce their environmental footprint.

One of the interesting things I found was that so many schools are totally across the wastage issue. They have really strong commitments to managing waste in their schools and canteens and the like. But they did not look so much at the front end; that is, what are kids eating, and what are the food miles in what they are eating? We know from the evidence that animal-sourced foods can be significant contributors to environmental damage. Livestock, in particular, is responsible for approximately half of food-generated greenhouse gas emissions. Therefore, encouraging students to adopt sustainable diets and reduce food waste at school may lead them to make similar behaviour changes beyond school and influence family decisions. All that is very positive in relation to how we move forward in this space.

Again, I would like to congratulate the committee and the people who came to present evidence about our schools, and to reinforce finding 23, which states —

> There are significant opportunities for the Department of Education to increase focus on protecting green space and bushland, and promoting low climate impact diets in schools.

That finding, for me, as members would not be at all surprised to know, is highly significant. I absolutely endorse this report and commend it to the house.

MRS L.A. MUNDAY (Dawesville) [10.47 am]: I rise today to speak on the report of the Education and Health Standing Committee titled *Making hope practical: Report of the inquiry into the response of Western Australian schools to climate change*. When we used the word "hope" in our title, it is not the kind of wishful thinking, cross-your-fingers kind of hope. Hope is a strength that is actionable. It can have short, medium and long-term goals with plans from A to Z. It just needs people who are full of hope to lead.

I still remember when it became extremely obvious to this committee what our first inquiry was going to be. It was after listening to Dr Tarun Weeramanthri speak desperately about the need for greater climate action to be taken by everyone. Dr Weeramanthri was the author of the *Climate health WA inquiry: Final report*, dated November 2020. He and his inquiry team made it very clear that climate scientists are in agreement that the heating of the globe is being driven by human activities, and they emphasised the criticality of climate action in the next 10 years as essential to limit further warming. The title of this report, *Making hope practical*, is an ode to Dr Weeramanthri and his team, because during the hearing with us, he stated that they created their report around a quote, "Make hope practical, not despair convincing." They felt that if they were going to raise people's concerns about climate change, they needed to provide people with an opportunity to contribute to this action; otherwise, all we do is create fear.

The McGowan state government had already started working in WA towards making a contribution to reducing global warming by announcing, in December 2018, the development of a state climate policy to help guide the state's transition to a low-carbon future. Also, in 2019, the Premier stated our commitment to achieve net zero emissions for Western Australia by 2050. Before we met Dr Weeramanthri, I thought, "Wow! That's awesome; zero emissions by 2050", but he explained that unless we start making some big changes before the end of this term of the forty-first Parliament, we will be sadly lacking.

Schools are a great place to start. Because our schools house, educate and nourish our children's hearts and souls and help them build their dreams, we found concerning the evidence of the prevalence of climate anxiety in children and young people. Schools assume a social responsibility in educating staff, students and families more widely, so they are in a position to make informed decisions about issues outside our schools. This is strategically important to influencing individual behaviour change, as well as reflecting on the broader social and economic systems that are at the root of climate change. The wide social reach of Western Australian schools also places them in a unique position to influence individuals and communities to think and live sustainably.

The committee finding that I want to discuss and focus on today is the one that seeks to create action at a school level. Finding 12 states —

> Support from school principals is essential to school engagement with climate action.

That will cost nothing, but create much action. Leadership is a strength that involves being committed to the goals of the group. It involves setting and accomplishing prescribed milestones, while enlisting effective help and building coalitions. Great leaders are able to provide a positive vision or message that will empower and inspire others to stand and act in accordance with their plans. Departmental leadership is certainly important in communicating to schools that sustainability is a priority and in supporting schools to take action. However, school leaders—principals, staff and

school boards—will have the most direct impact on students. They are uniquely positioned to foster new levels of support for climate solutions and can help by becoming climate literate and vocal, model leaders within their communities.

The committee also heard from young people who made submissions and comments. One of those was Isabella Poll, who is a member of Millennium Kids, a not-for-profit environmental organisation. She said —

> ***I really see that schools can not only become educators in their communities, but they can also become change makers.***

Dr Aresh Anwar, the chief executive of the WA Child and Adolescent Health Service, is quoted in the *Climate health WA inquiry: Final report* as saying —

> *"Children form 25 per cent of the Western Australian population but account for 100 per cent of its future"*

When we think of it like that, how can we not lean in and act to make a more sustainable future for our kids?

A supportive principal can facilitate enablers and overcome barriers for a whole-school approach, and lead teachers and the school community to sustainability and climate action. A disinterested or resistant principal can do the opposite. We heard the best and the worst outcomes, of both extremely engaged principals involved in climate action and a change of principal at a school that led to a change of focus and values, with a devastating impact on well-established sustainability actions that were already occurring in the school. Given the pivotal role that principals play in schools engaging with sustainability and climate action, introducing a measure of accountability would further communicate that this is an area of priority and encourage compliance. There is already a requirement in the principals' statement of expectations that principals comply with departmental policies and initiatives. However, explicitly including sustainability in the department's other accountability documents and procedures would take this further. This could include principals' professional reviews, the independent public school delivery and performance agreements, and the public school review.

One example of a case study that was part of our submission is Lynwood Senior High School. That school works to reduce its greenhouse gas emissions by reinforcing behavioural change and retrofitting equipment to reduce resource consumption. It allocated a sustainability program coordinator, who implemented innovations to engage and empower students and staff to make changes within the school, and then to take further climate action at home by engaging their parents and loved ones as well. This school uses ClimateClever, a data-driven program that has online tools to help schools measure, monitor, compare and reduce their carbon footprint. From 2015 to 2020, the school had total electricity savings of $150 088. These savings have been reinvested into new sustainability initiatives. These savings were made despite an increase in reverse-cycle air conditioner installation. The school noted that behavioural change was the biggest impact. The school used air conditioning selectively, and it was run at recommended temperatures—not at 18 degrees as I would probably run it! The school also has a switch-off process that it implements at every school holiday and Christmas break.

For some time now, increasing school autonomy has been a significant aspect of the Department of Education's long-term vision and strategic direction for public schools in Western Australia. This aims to shift more decisions to the local level and to empower principals and their staff to act with greater authority and responsibility for the success of their school. That is why my speech today is directed more to the principals and leadership groups of our schools. I think it is very important for principals to maintain control of their needs within their region. The main vehicle for this occurring has been the independent public schools initiative and its single-line budgeting, which gives schools increased flexibilities and responsibilities to make local decisions across a range of school operations. Similarly, Catholic schools in Western Australia describe themselves as having a system of connected autonomy, whereby principals lead their schools "with empathy for context".

Climate change and climate action is an issue that requires a systemic response. That is a recognised challenge for decentralised systems, including education. Evidence to the inquiry was clear that the majority of current climate action in schools is led by individual champions at the local level. However, research has shown that systemic change is achievable only with top-down direction and communication about the importance of embedding sustainability in schools. Therefore, the department's role in facilitating climate action in schools must be one of leadership. Practically, this means setting clear expectations and objectives in frameworks and policies, and providing expertise and support to achieve them.

I would like to thank all the government departments that gave their time for our hearings. To all the people who gave submissions, and to those whose passion and driving force is climate action, thank you for your views and insight. It was certainly an eye-opening experience for me. To our principal research officer, Catie Parsons, and her support team of researchers, Rachel Wells and Sylvia Wolf, a huge thankyou. To my fellow committee members, it was a pleasure to work with you.

In closing, I would like to leave with members the Greek proverb, "A society grows great when old men plant trees in whose shade they shall never sit." This is what climate action and sustainable living is all about. We have to all work together to plant the proverbial trees now so that our children will be able to enjoy shade and life in their future.

The ACTING SPEAKER (Ms M.M. Quirk): Before I give the call to the member for Hillarys, the research staff of the committee have been mentioned on several occasions. I understand they have all succumbed to COVID, so we wish them a speedy recovery.

MS C.M. COLLINS (Hillarys) [10.56 am]: "Making hope practical" was the overarching theme and thus became the title of our first Education and Health Standing Committee inquiry report, which looked into the response of Western Australian schools to climate change. The McGowan government has committed to achieving net zero emissions by 2050. We know this will require long-term investment across a wide range of industries in Western Australia. In March 2019, Professor Tarun Weeramanthri was appointed by the Chief Health Officer to conduct a climate health inquiry. His final report set out a blueprint for the next 10 years for the Western Australian health system's response to adapt to climate change to reduce its harmful impacts and protect the health of the community. It also defined how health services can do more to reduce emissions and waste. The Education and Health Standing Committee had the pleasure of hearing from Professor Weeramanthri early in the term of its inquiry, and his enthusiasm, energy and passion for climate action was a huge inspiration behind our decision to pursue this line of inquiry.

Like the Western Australian Department of Health, the Department of Education has one of the largest workforces and budgets of all state government departments. Although schools are definitely not considered a high-emission industry, their physical footprint and use of resources can be large, given the number of people who utilise this service. But, much more important than that, the education sector has the ability to educate the coming generations of Western Australians on the very real impacts that climate change will have on their lives, and to encourage active participation in the protection of our shared environment. A UNESCO report published in 2016 stated that schools have a central role to play in helping learners understand the causes of climate change so that they can make informed decisions and take appropriate actions, and acquire the necessary values and skills to participate in the transition to more sustainable lifestyles, green economies and climate-resilient societies.

We discovered through our research that the education sector largely remains under-exploited as a strategic resource to help mitigate and adapt to climate change. That is why we pursued this inquiry. Our committee sought to collate evidence of the co-benefits of climate action in schools; provide evidence on climate change mitigation and adaptation actions that are currently being undertaken; identify barriers that schools encounter in undertaking climate action; and highlight what more can be done to support schools with this task. We received over 60 written submissions and engaged in approximately 13 hearings with over 50 involved stakeholders. I want to sincerely thank all the individuals and subject matter experts who took the time to give submissions to this inquiry. It truly was a privilege to hear from such passionate and knowledgeable educators and advocators, particularly the young people who emphasised how climate change will directly impact their lives. A special thanks goes to the Australian Association for Environmental Education for its very thorough contribution to this inquiry.

I would like to go through some of the findings detailed in our report. The committee was particularly concerned by the prevalence of the phenomenon referred to as "climate anxiety" in children and young people. Raised anxiety in any communal society is indicative of an imminent danger, with the implication that a collective course of action must be implemented to alleviate that danger. However, with an existential threat such as the global threat of climate change, societal anxiety can become intense and overwhelming when the crisis is so complex and there appears to be no concerted actions or a clear solution in view. One of the main desired outcomes of this report is that it is imperative to overcome this generalised feeling of societal helplessness and to make hope practical, not despair convincing. Therefore, improving access to a number of educational tools and encouraging individual and group involvement were key areas of focus of this inquiry.

The Department of Education's present mission approach to focused investment in STEM subjects is an important tool to foster an interest amongst students in understanding the complexities around climate change. Practical applications of a departmental approach would be ensuring that school structures are attractive, with green-designed buildings with clean air, natural light and decent ventilation, all of which have proven to improve student learning and engagement. Active transport to and from schools should be encouraged, as this improves the health outcomes of students. This is already being pursued by the Department of Transport through the Your Move schools program. Implementing utilities audits has revealed numerous resource wastage points, and closing these off can offer substantial sources of savings to a school. As an example, one local school managed to achieve a power saving of over $10 000 a year from the utilities audit process.

The committee found that school students' engagement with school strikes for climate action were largely broadly positive. It must be noted that the Department of Education has done some great work in this space, and schools are strongly encouraged to implement the department's frameworks. The Sustainable Schools WA framework is highly regarded; however, it was noted that its impact may have been limited due to lack of funding. Caring for Country Together is the department's new sustainability framework and truly does offer hope in this space.

Much of the evidence given to us was around a mandate, and in Australia there has been a steady push for increased autonomy for schools to establish and create their own methodology for implementing a number of government initiatives. With this increased decentralisation, it is therefore proving difficult to implement a statewide climate action mandate. Schools might need incentives to try to pursue this climate action. Presently, there are many school action programs and education, but these are being driven by what we call "climate champions". Implementation of a structured climate change program has been somewhat sporadic because of this if that individual leaves the school. It is crucial to support the principals, but the responsibility must be shared across all staff and positions of authority.

Waste handling, water management and energy efficiency are three areas that are well-established benchmarks, given that schools have concrete figures to aim towards. Something that I am particularly proud of in my electorate is the example of a green space that is being utilised at South Padbury Primary School. This school has its very own Miyawaki forest. This is a tiny forest. I was privileged to join students from the school in July 2021 to assist with planting the first trees and, a year on, the forest canopy has grown significantly. Something like this allows students to monitor the growth, air and soil temperature regimes, and biodiversity of the forest over time. Hands-on practical skills, such as planting, use of scientific equipment, measuring variables, data collection and so on, are very useful for young students and I encourage many other schools to look at this.

It is important to note that curriculum is an important building block. However, we noted in our inquiry that the ability to recommend amendments to the curriculum is limited because it is highly complex; we have an Australian curriculum, as well as a Western Australian curriculum. We recommended that there should be explicit references to climate change in the curriculum. At the moment, it falls under the broad banner of sustainability.

A lot of fantastic work is being done in this space by a young group of students at Duncraig Senior High School called the "climate crew", and we were lucky to hear from a young student, Jasmina Nikolovski, about her experience with this.

To finish, this inquiry is just one small element in maintaining momentum on climate action in WA over the next decade, but dealing with the generations of students whose lives will be impacted by this global phenomenon is an important element no less. It was enlightening to understand just how passionate so many Western Australians are about this topic. It was very clear that climate action was the winner at the federal election. I really hope that this inquiry will raise awareness of the impacts of climate change, and I thank all my fellow committee members and research officers.

MR K.J.J. MICHEL (Pilbara) [11.06 am]: I would like to make a contribution on the second report of the Education and Health Standing Committee, *Making hope practical: Report of the inquiry into the response of Western Australian schools to climate change*. I would like to thank the chair, Chris Tallentire, member for Thornlie, and my fellow parliamentary colleagues, Lisa Baker, Lisa Munday and Caitlin Collins, for their hard work, interaction and support.

This is a great topic, as it sits high on the agenda for the future of mankind and the planet. It is this energy that we consider to be one of the co-benefits of climate action in schools. Climate change mitigation and adaptation actions are currently being undertaken in schools and they are achieving benefits. Barriers that schools encounter in undertaking climate action need to be addressed. What more can be done to support schools to respond to climate change? As discussed in this report, all students deserve an education that enables them to engage in the pressing issues of our time. The response by schools to climate change involves facilitating intellectual understanding, making material improvements and enabling individual schools. As discussed in this report, the co-benefits of climate action in schools can be achieved through department strategies and frameworks, action at the school level, school infrastructure and operations, and the curriculum.

We held 13 hearings and invited quite a lot of agencies, including the Departments of Education, Health, and Water and Environmental Regulation, schools and a few others to give evidence to our inquiry, and it was great to hear the response from every one of them.

I had the opportunity to visit Coolbinia Primary School and Bob Hawke College, and I was very impressed with the schools' understanding of this issue and how serious they are about making a change for the better at the school in the future.

Education is crucial to promote climate action. It helps people understand and address the impact of the climate crisis, empowering them with the knowledge, skills, values and attitude needed to act as agents of change. As students and teachers learn about climate change, it is important that they can be readily involved in taking action to lessen its potential harmful impacts. Creating a more sustainable world for this future generation is very important. This can be described as transformative or action-based teaching and learning. When an educational institution allows for such growth, it helps students develop a strong personal connection to climate solutions as well as a sense of personal agency and empowerment. It can have a consequential impact on students' daily behaviours and decision-making that reduces their overall lifetime carbon footprint.

Options such as worm farming, organic composting, using renewable energy, reducing, re-using and recycling, and travel smart actions are playing a significant part in reducing our greenhouse gas pollution and establishing a healthy real-world connection for students and faculty towards their impact on the environment around them.

Acting Speaker (Mrs L.A. Munday), as you are aware, my background is air conditioning and electrical. I always look for changes towards better systems in air conditioning and solar energy. We have come a long way to making changes in renewable energy. I was part of the conversation in regard to a 2021 election commitment for solar energy for schools in the Pilbara. One of the larger scale changes to schools throughout Western Australia is the implementation of renewable energy sources—more specifically, solar energy. The benefits of using solar energy can be championed repeatedly for a long time, and with a purpose. Utilising it to generate power can greatly reduce CO_2 emissions by decreasing the demand for fossil fuels.

Horizon Power has partnered with the Department of Education to deliver rooftop solar systems to a further 32 schools across Western Australia's north west region as part of the second tranche of the solar schools initiative. The second tranche of the solar schools program will deliver systems to 19 schools in the Kimberley, 12 schools in the Pilbara and one school in the Gascoyne, starting with Broome North Primary School. An additional $4.6 million will be invested in the program as part of the state government's $45 million schools clean energy technology fund, which will see solar panels and virtual power plants installed at public schools across the state. Collectively, these 32 systems will reduce the Department of Education's greenhouse gas emissions by over 1 000 tonnes a year. That is the equivalent of taking more than 300 petrol cars off the road permanently. The program aims to reduce schools' electricity bills by around 24 per cent a year, allowing them to divert those funds into much-needed causes.

Another great focal point is offering students and faculty the option of plant-based meals for establishments that allow such. I am told that plant-based meals provide excellent nutrition, and they are rich in fibre, vitamins and antioxidants that boost students' health. Children who are raised on healthy vegan diets have a reduced risk of heart disease, cancer, diabetes and other conditions. Shifting diets from meat and other animal products to plant-based diets has a high potential for reducing our carbon footprint and mitigating climate change as well as improving human health. This does not necessarily mean that educational institutions offering food sources need to go completely vegan, but being able to offer a variety of healthier alternatives should be encouraged.

Acting Speaker, it was great to have some quick discussions, as you are aware, into introducing a meat-free day in schools. As someone who personally loves non-vegetarian and vegetarian meals, it is important that we have a choice for the benefit of everyone. I came from a country that is strictly vegetarian, and also a country that practices religiously on health and wellbeing by making sure that every part of their daily life is a natural life. We used leaves as plates and mud mugs as cups rather than using plastic or styrofoam cups. Most of the food we ate was grown organically.

I can go on and on but it is the Western society—I mean the First World and Second World countries—that could do more to stop sending dirty technology and industry to Third World countries. That will not only support change in health and education, but also look into recommendations for a better future of the whole planet in years to come.

I know that a series of changes are occurring with lithium batteries and hydrogen, to name a few, but when technology or inventions are made, it is important that at the same time, these materials are disposed of properly to reduce waste and contamination and are re-usable.

I would like to thank all those who gave evidence to this inquiry and my parliamentary colleagues for their speeches and their input. I would also like to thank the wonderful committee staff—Mrs Catie Parsons, Ms Rachel Wells and Ms Sylvia Wolf—for helping us every step of the way and being committed to making a change. I commend the report to the house.