

Our Ref: #65657

12 September 2008

Mr John Carter
Secretary
Standing Committee on Education, Employment
and Workplace Relations
PO Box 6100
Parliament House
CANBERRA ACT 2600

Dear Mr Carter

Inquiry into the Effects of Climate Change on Training and Employment Needs

I refer to your email of 14th July in relation to the above inquiry and have pleasure in attaching a submission.

If I can be of any further assistance, please do not hesitate to contact me.

Yours sincerely



Tom Karmel
Managing Director

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Submission

by Tom Karmel, National Centre for Vocational Education Research (NCVER)
to

Senate Education, Employment and Workplace Relations Committee

Inquiry into the effects of climate change on training and employment needs

In this submission I wish to comment in relation to the Australian vocational education and training (VET) sector. VET in Australia can be broadly characterised as being industry led. This means that the system is intended to provide individuals with skills and competencies that meet the needs of industry. The most important element of the system to achieve this aim comprises the training packages that are developed by industry skills councils on behalf of industry more broadly. Each training package contains a set of units which list the competencies that those being trained are expected to achieve, and are constantly being revised to take account of the evolving needs of industry. A list of the skills industry councils and the training packages is at attachment A.

I argue that the way the VET system should deal with the effects of climate change is no different from the way it should deal with any other sort of structural change in the economy. The VET system needs to respond to the changing requirements of industry, and if the VET system remains focused on that then there is no specific need for action on climate change. In fact, there is direct evidence that this is happening. The example I use is that in recent years there have been numerous units designed around the 'sustainability' as a direct result of the way industry is adapting to new environmental priorities. Examples of such units are listed in attachment B.

In recent years there has been some research done on the issue of sustainability, of which climate change is a key element. In particular, I draw your attention to a book due to be published by Springer in November.

Fien, John; Maclean, Rupert; Park, Man-Gon (Eds.) (forthcoming) *Work, Learning and Sustainable Development: Opportunities and Challenges*. Series: *Technical and Vocational Education and Training: Issues, Concerns and Prospects*, Vol. 8, Springer, ISBN: 978-1-4020-8193-4

I contributed a final synthesis chapter, in which I point to the ideological zeal that many bring to the topic and argue that it would be better for the VET sector to focus on meeting industry's needs than to see VET as a crusader for sustainability. Sustainability issues will directly affect economic structures and the way industries operate, and VET would be contributing very significantly to the sustainability cause if it can be flexible in the competencies it teaches. That is, VET needs to focus on meeting industry's needs rather than sustainability as such.

You may also be interested in a report published by NCVER in 2007.

David Goldney D, Murphy T, Fien J and Kent J (2007) *Finding the common ground: Is there a place for sustainability education in VET?*, NCVER

Society is becoming increasingly aware of the need for education to play a key role in integrating knowledge and understanding about sustainability into practical, vocational skills which can be used in the workplace. Education for sustainability is now a widely accepted concept which seeks to promote and develop sustainability skills and awareness throughout a learner's educational pathway. This report shows that the vocational education and training (VET) sector has a key role to play in promoting sustainability education by incorporating these skills into training packages. However, significant barriers exist to implementation, including the lack of a shared national vision and adequate resources. The report concludes with suggestions to encourage the adoption of education for sustainability in VET policy and practice

Skills Councils in the Vocational Education and Training Sector

Agri-Food Industry Skills Council
 Automotive Training Australia Ltd
 Community Services & Health Industry Skills Council Ltd
 Construction & Property Services Industry Skills Council
 EE-oz Training Standards Sydney
 Government Skills Australia
 Innovation & Business Skills Australia
 Manufacturing Skills Australia
 Public Safety Industry Training Advisory Body
 Service Skills Australia
 SkillsDMC
 Transport & Logistics Industry Skills Council

List of Vocational Education and Training training packages

Aeroskills
 Aeroskills Training Package
 Agri-Food Training Package
 Amenity Horticulture
 Animal Care and Management
 Asset Maintenance
 Asset Security
 Australian Meat Industry
 Australian Red Cross Blood Services (CONFIDENTIAL - Not all detail is accessible)
 Automotive Industry Manufacturing
 Automotive Industry Retail, Service and Repair
 Aviation Training Package Version 1
 Aviation
 Beauty
 Boral Interior Lining (CONFIDENTIAL - detail not available)
 Business Services
 Business Services Training Package
 Caravan Industry
 Chemical, Hydrocarbons and Oil Refining
 Chemical, Hydrocarbons and Refining
 Civil Construction
 Civil Construction
 Coal
 Community Pharmacy
 Community Recreation Industry
 Community Services
 Competitive Manufacturing
 Conditionally Endorsed Agri-food Qualifications
 Conditionally Endorsed Manufacturing Qualifications
 Conditionally Endorsed Transport and Logistics Qualifications
 Conservation and Land Management
 Correctional Service Training Package
 Correctional Services
 Drilling Industry

Electricity Supply Industry - Generation Sector
Electrotechnology
Electrotechnology Training Package
Entertainment
Extractive Industry
Film, TV, Radio and Multimedia
Financial Services
Fitness Industry
Floristry
Food Processing Industry
Forest and Forest Products
Funeral Services
Furnishing Industry
Gas Industry (Incomplete)
General Construction
Hairdressing
Health
Hospitality
Information and Communications Technology
Kodak (Australasia) - (CONFIDENTIAL - Not all detail is accessible)
Laboratory Operations
Lifts Industry
Local Government
Manufactured Mineral Products
Manufacturing Training Package
Maritime
Maritime Training Package
Metal and Engineering Industry
Metalliferous Mining
Museum and Library/Information Services
Music
Off-Site Construction
Outdoor Recreation Industry
P & O Ports
Plastics, Rubber and Cablemaking
Plastics, Rubber and Cablemaking Training Package
Plumbing and Services
Printing and Graphic Arts
Property Development and Management
Property Services Training Package
Public Safety (Not all units available for public access)
Public Sector
Pulp and Paper Manufacturing Industries
Qantas - (CONFIDENTIAL - Not all detail is accessible)
Queensland Rail - Civil Infrastructure (CONFIDENTIAL - Not all detail is accessible)
Racing Industry
Retail
Retail Services Training Package
Ricegrowers' Cooperative Limited - (CONFIDENTIAL - Not all detail is accessible)
Rural Production
Screen and Media Training Package
Seafood Industry
Service Technician Portable Fire Equipment (Chubb Fire)

Sport Industry
Sugar Milling
Telecommunications
Textiles, Clothing and Footwear
Textiles, Clothing and Footwear Training Package
Tourism
Tourism, Hospitality and Events
Training and Assessment
Transmission, Distribution and Rail Sector
Transport and Distribution
Transport and Logistics Training Package
Visual Arts, Craft and Design
Water Industry
Water Training Package
Wholesale
Woolworths (CONFIDENTIAL - not all detail is accessible)
Source: National Training Information System

ATTACHMENT B

Units from training packages that feature 'sustainability'.

Training package title	Unit title
Agriculture (Superseded by RTE03)	Apply sustainable sugar cane production practices
Agriculture (Superseded by RTE03)	Implement sustainable land use
Amenity Horticulture Training Package	Develop and implement sustainable land use strategies
Australian Meat Industry Training Package	Apply environmentally sustainable work practices
Business Services Training Package	Implement and monitor environmentally sustainable work practices
Business Services Training Package	Participate in environmentally sustainable work practices
Caravan Industry (Superseded by THC04)	Implement sustainable horticultural practices
Caravan Industry (Superseded by THC04)	Plan and develop ecologically sustainable tourism operations
Caravan Industry Training Package	Plan and develop ecologically sustainable tourism operations
Community Recreation Industry Training Package	Achieve sustainable land management
Competitive Manufacturing Training Package	Develop and manage sustainable energy practices
Competitive Manufacturing Training Package	Develop and manage sustainable environmental practices
Competitive Manufacturing Training Package	Use sustainable energy practices
Competitive Manufacturing Training Package	Use sustainable environmental practices
Electricity Supply Industry - Generation Sector Training Package	Apply Environmental and Sustainable Energy Procedures
Electricity Supply Industry - Transmission And Distribution Training Package (Superseded by UET06)	Comply with environmental and sustainable energy procedures
Electricity Supply Industry - Transmission And Distribution Training Package (Superseded by UET06)	Implement & monitor environmental and sustainable energy management policies & procedures
Electricity Supply Industry - Transmission And Distribution Training Package (Superseded by UET06)	Implement environmental and sustainable energy procedures
Electrotechnology Industry Training Package (Superseded by UEE06)	Apply sustainable energy practice in daily activities
Electrotechnology Industry Training Package (Superseded by UEE06)	Promote sustainable energy practice in the community
Electrotechnology Industry Training Package (Superseded by UEE06)	Provide basic sustainable energy solutions for energy reduction in domestic premises
Electrotechnology Training Package	Apply sustainable energy practice in daily activities
Electrotechnology Training Package	Develop strategies to address sustainability issues
Electrotechnology Training Package	Implement & monitor, policies & procedures for environmentally sustainable electrotech work practice
Electrotechnology Training Package	Participate in environmentally sustainable work practices
Electrotechnology Training Package	Promote sustainable energy practice in the community
Electrotechnology Training Package	Provide basic sustainable energy solutions for energy reduction in domestic premises
Electrotechnology Training Package (Superseded by UEE07)	Apply sustainable energy practice in daily activities
Electrotechnology Training Package (Superseded by UEE07)	Develop strategies to address sustainability issues
Electrotechnology Training Package (Superseded by UEE07)	Promote sustainable energy practice in the community

ATTACHMENT B

Electrotechnology Training Package (Superseded by UEE07)	Provide basic sustainable energy solutions for energy reduction in domestic premises
Entertainment Training Package	Participate in environmentally sustainable work practices
Fitness Industry Training Package	Achieve sustainable land management
Forest and Forest Products Industry (Superseded by FPI05)	Implement sustainable forestry practices
Forest and Forest Products Industry (Superseded by FPI05)	Implement sustainable horticultural practices
Forest and Forest Products Training Package	Implement sustainable forestry practices
General Construction (Superseded by BCG03)	Apply ecologically sustainable development principles to the built environment
General Construction Training Package	Apply ecologically sustainable development principles to the built environment
General Construction Training Package	Apply sustainable building design principles to water management systems
General Construction Training Package	Build thermally efficient and sustainable structures
Horticulture (Superseded by RTF03)	Implement sustainable horticultural practices
Hospitality Training Package	Plan and develop ecologically sustainable tourism operations
Local Government (Superseded by LGA04)	Achieve an efficient and sustainable use of natural resources
Local Government (Superseded by LGA04)	Apply ecologically sustainable development principles to the built environment
Local Government (Superseded by LGA04)	Develop ecologically sustainable land management systems
Local Government Training Package	Achieve an efficient and sustainable use of natural resources
Local Government Training Package	Apply the principles of ecologically sustainable development to council decisions
Local Government Training Package	Develop ecologically sustainable land management systems
Manufacturing Training Package	Implement and monitor environmentally sustainable work practices
Manufacturing Training Package	Participate in environmentally sustainable work practices
National Community Recreation Industry (Superseded by SRC04)	Achieve sustainable land management
National Fitness Industry (Superseded by SRF04)	Achieve sustainable land management
National Outdoor Recreation Industry (Superseded by SRO03)	Achieve sustainable land management
National Sport Industry (Superseded by SRS03)	Achieve sustainable land management
Outdoor Recreation Industry Training Package	Achieve sustainable land management
Outdoor Recreation Industry Training Package	Plan and develop ecologically sustainable tourism operations
Plastics, Rubber and Cablemaking Training Package	Develop and manage sustainable energy practices
Plastics, Rubber and Cablemaking Training Package	Develop and manage sustainable environmental practices
Plumbing and Services Training Package	Apply sustainable building design principles to water management systems
Plumbing and Services Training Package	Build thermally efficient and sustainable structures
Property Services Training Package	Implement and monitor environmentally sustainable work practices
Property Services Training Package	Participate in environmentally sustainable work practices
Public Safety (Not All Units Available For Public Access) Training Package	Achieve an efficient and sustainable use of natural resources

Public Safety (Not All Units Available For Public Access) Training Package	Achieve an efficient and sustainable use of natural resources
Public Safety (Not All Units Available For Public Access) Training Package	Develop ecologically sustainable land management systems
Public Safety (Not All Units Available For Public Access) Training Package	Develop ecologically sustainable land management systems
Rural Production Training Package	Develop and implement sustainable land use strategies
Seafood Industry (Superseded by SFI04)	Coordinate sustainable aquacultural practices
Seafood Industry (Superseded by SFI04)	Plan and develop ecologically sustainable tourism operations
Seafood Industry (Superseded by SFI04)	Plan ecologically sustainable aquacultural practices
Seafood Industry Training Package	Coordinate sustainable aquacultural practices
Seafood Industry Training Package	Implement and monitor environmentally sustainable work practices
Seafood Industry Training Package	Participate in environmentally sustainable work practices
Seafood Industry Training Package	Plan and develop ecologically sustainable tourism operations
Seafood Industry Training Package	Plan ecologically sustainable aquacultural practices
Seafood Industry Training Package	Promote sustainable use of local marine and freshwater environments
Sport Industry Training Package	Achieve sustainable land management
Textiles, Clothing and Footwear Training Package	Implement and monitor environmentally sustainable work practices
Textiles, Clothing and Footwear Training Package	Participate in environmentally sustainable work practices
Textiles, Clothing and Footwear Training Package	Use sustainable energy practices
Tourism (Superseded by THT02)	Plan and develop ecologically sustainable tourism operations
Tourism Training Package	Plan and develop ecologically sustainable tourism operations
Tourism, Hospitality and Events	Implement and monitor environmentally sustainable work practices
Tourism, Hospitality and Events	Participate in environmentally sustainable work practices
Tourism, Hospitality and Events	Plan and develop ecologically sustainable tourism operations
Transmission, Distribution and Rail Sector Training Package	Apply environmental and sustainable energy procedures
Transmission, Distribution and Rail Sector Training Package	Implement and monitor environmental and sustainable energy management policies and procedures
Water Training Package	Investigate sustainable water cycle management
Water Training Package	Review and evaluate water and wastewater sustainability objectives

Source: National Training Information System

