# **Environment and Resource Efficiency Plans EREP**

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# Role of EPA: a modern regulator





"The Environment Protection Authority will be equipped to ensure Victoria becomes one of the first places in the world where the environment routinely becomes a business opportunity rather than a business cost."

The Hon John Thwaites

Former Minister for Water, Environment and Climate Change

#### **EREP: the basics**





#### Who is involved in EREP?

- Sites using more than 120ML/yr water or 100TJ/yr energy
- ~250 businesses including food, plastics, petrochemical, paper manufacturing, energy suppliers, universities, hospitals, sports venues, shopping centres

#### What do they need to do?

- Self-assess resource use and register on-line by March 2008 (done)
- Develop action plan to reduce energy, water and waste by Dec 2008
- Implement actions with 3 year or better payback 2008 onwards
- Report on progress 2008 onwards

# Support to businesses





- EREP Guidelines
  - Plan checklist (Section 2 and App 6)
- Online EREP Toolkit



- Training and Workshops
  - How to use toolkit
  - Sector specific information (Module 5)
  - Relationship to other programs (EEO, waterMAP etc)
- EREP Relationship Manager

Module 1: Overview

Module 2: A management systems approach to resource efficiency

Module 3: A resource efficiency site assessment procedure

Module 4: Calculating payback periods

Module 5: Resource management tools, and where you can get further help

# Developing a Plan: Steps





#### 1. Establish baseline data

- representative of typical resource use? assumptions / anomalies
- at least 12 month period

#### 2. Develop resource efficiency indicators

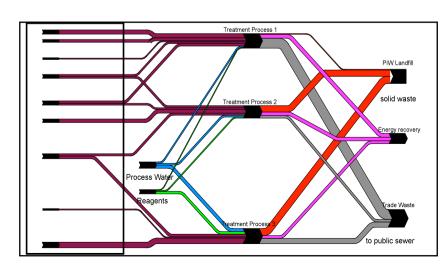
relevant business activity measure (eg. water use/tonne, E use/unit production)

3. Assess energy, water using and waste generating

activities

Site walkthrough

- Audits
- Metering
- Mass balances / resource flow diagrams



# Developing a Plan: Steps





#### 4. Identify and prioritise actions

- Involve the right people internal/external
- Research best practice
- Brainstorming

#### 5. Calculate paybacks (Module 4)

- Payback period = Initial investment / annual savings
- Whole of business costs

#### 6. Prepare action plan (submit on-line)

CC	OMPANY NAMI						LICENCE NUMBER											
ERI	EREP ACTION PLAN							Effectively Cash Flows therefore should be Postive and Negative respectively							Integrated Assessment Summary			
Action ID Number	Major Process Description	Action Item	Project Responsibility	Project Start Date	Project Completion Date	Project Completed Yes/No/Started	Project Cost	Energy \$/yr	Water \$/yr	Waste \$/yr	Misc \$	Total Savings \$/yr	Payback Years	Savings tC02 ENERGY GJ	WATER KL	SOLID WASTE Tonnes	LIQUID WASTE KL	
	Compressed air supply for entire plant.	Install variable speed rotary screw air compressor	lan Stevenson	1/07/2008	31/07/2008		\$ 40,783	\$26,493	so.	\$∩	\$∩	\$ 26,49	3 1.5	1421.28	0	0	0	
	<u> </u>	Obtain combustion report results from Hunt Eng and monitor all indirect fired driers and boilers	Richard Anderson	31/07/2008	31/12/2008		\$ 3,000	\$12,954	\$0	\$0	\$0			5100	0	0	0	
3	Steam generation systems	Condensate Return	Richard Anderson	31/07/2008	30/09/2008		\$ 12,800	\$255,702	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	\$ 255,70	2 0.1	100670	0	0	0	
4	Cooling System	Chilled Water Tank Insulation	Richard Anderson	28/08/2007	31/10/2008		\$ 3,200	\$5,55 <u>5</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	\$ 5,55	0.6	298	0	0	0	
	Factory Ventillation Systems	VSD on Condenser Fan	lan Stevenson	28/08/2008	31/10/2008		\$ 8,500	<b>\$4,175</b>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	\$ 4,179	5 2.0	224	0	0	0	
6	Milk Powder Drying	Use of Steam Heaters to Replace Electric	Clark Kensington	30/09/2008	30/11/2008		\$300,000	\$199,075	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>			10680	0	0	0	
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# **SPC Ardmona: Shepparton**





- Changes to cleaning practices included:
  - Reducing the diameter of hoses from 1" to 3/4"
  - Installing trigger nozzles
  - Cultural change (eg employing dry cleanup methods)



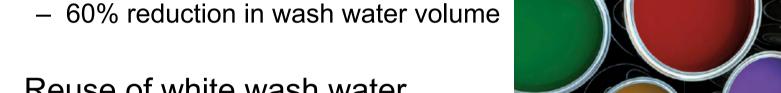
Water savings = 310ML/annum Payback = less than 1 year

# **The Paint Factory**





- High-pressure water gun
  - Cleaning time has decreased



- Reuse of white wash water
  - Represents more than 60% of all wash water
  - Alteration to recipes
  - Raw material (eg thickeners) recycled
- Water savings 75,000L/annum
- Implementation costs \$5,915
- Annual savings \$28,200



# **Flexibility**





- Use existing, current supporting documentation (eg. audit reports)
- Flexible reporting periods
- Recognition of existing efficiency work (eg. waterMAP, EEO etc)



# Other EREP program features





- Using environmental offsets:
  - Address an adverse environmental impact with an action at another location = net environmental benefit
- Using representative premises:
  - Using assessments of similar premises to identify actions

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